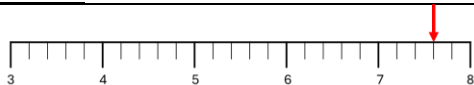

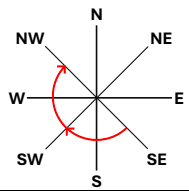
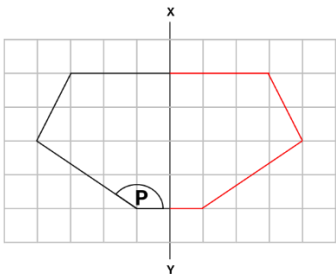
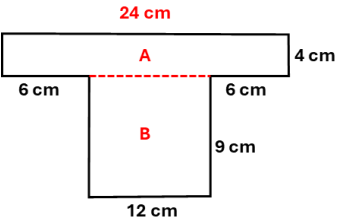
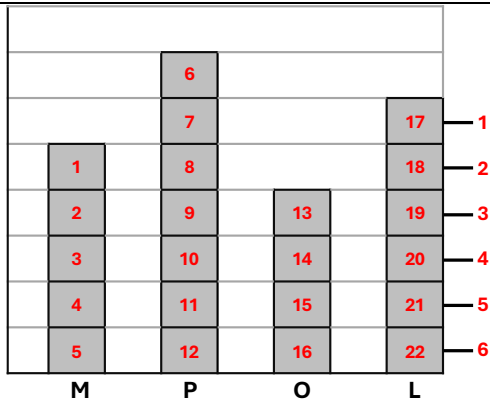
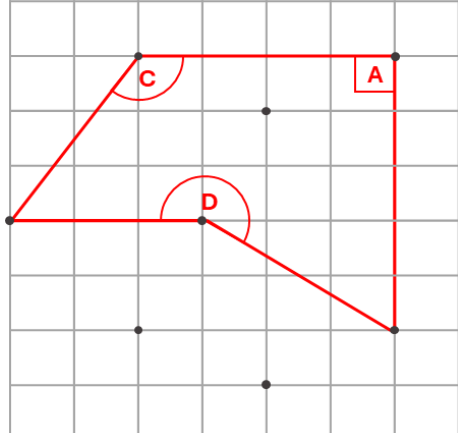


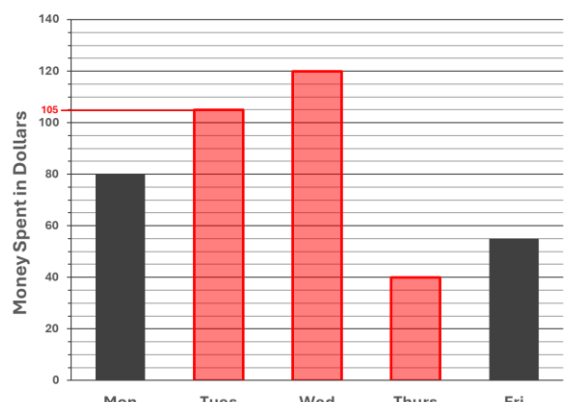
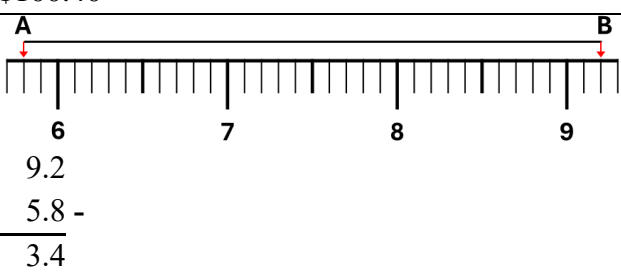
MATHEMATICS

pennacool.com Test 1 - Section 1	
1.	586 671
2.	Hundreds of thousands
3.	>
4.	608
5.	$\frac{7}{20}$
6.	$\begin{array}{r} 64.8 \\ 9 \times \\ \hline 583.2 \end{array}$
7.	
8.	$\frac{2500}{5} = 500 \text{ grams} = 0.5 \text{ kg} = \frac{1}{2} \text{ kg}$
9.	$V = (s)^3 = 216 \text{ cm}^3$
10.	$\frac{27}{36} = \frac{3}{4} = 0.75$
11.	greater
12.	 $\begin{array}{r} 7:35 \\ :45 + \\ \hline 8:20 \end{array}$
13.	$\begin{array}{r} 894 \\ 677 + \\ \hline 1571 \end{array}$
14.	$\frac{25}{100} \times \frac{200}{1} = 50$
15.	14
16.	North-West 
17.	8 edges
18.	Mean = 84 Rai sold the mean
19.	94
20.	$24 \times 2 \text{ cm} = 48 \text{ cm}$

pennacool.com Test 1 - Section 2					
21.	$2\frac{3}{4} \times 7.20 = \frac{11}{4} \times \frac{7.20}{1} = \19.80				
22.	Xavi is correct. There is a total of 1 number after the decimal point in 0.8, therefore, there must be one number after the point in the product.				
23.	$\text{VAT} = \frac{1}{8} \times \frac{960}{1} = \120 Price paid = \$960 + \$120 = \$1080				
24.	Total hours worked = 9 $\frac{1}{2}$ hours First 7 hours = \$48 \times 7 = \$336 Overtime = \$72 \times 2 $\frac{1}{2}$ = \$180 + $\underline{\underline{\$516}}$				
25.	<div style="display: flex; justify-content: space-around; align-items: center;"> 25 m <table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">12 m</td> <td style="padding: 5px;">36 m</td> </tr> <tr> <td style="padding: 5px;">Pool</td> <td style="padding: 5px;">Deck</td> </tr> </table> </div> $\text{Length of pool} = \frac{\text{Area}}{\text{Breadth}} = \frac{300 \text{ m}^2}{25 \text{ m}} = 12 \text{ m}$ $\text{Area of deck} = 300 \times 3 = 900 \text{ m}^2$ $\text{Length of deck} = \frac{900 \text{ m}^2}{25} = 36 \text{ m}$ $\text{Perimeter} = (L + B) \times 2$ $= ((36 \text{ m} + 12 \text{ m}) + 25 \text{ m}) \times 2$ $= (48 \text{ m} + 25 \text{ m}) \times 2 = 73 \text{ m} \times 2 = 146 \text{ m}$	12 m	36 m	Pool	Deck
12 m	36 m				
Pool	Deck				
26.	1kg at Shop A = \$9.60 \times 4 = \$38.40 1kg at Shop B = \$17.50 \times 2 = \$35 Shop B has the better deal by \$3.40				
27.	 <p>a.</p> <p>b. Angle P is greater than a quarter-turn OR Angle P is an obtuse angle</p>				
28.	$P = (46\text{m} + 32\text{m}) \times 2 = 78 \text{ m} \times 2 = 156 \text{ m}$ $= 156 \text{ m} - 4 \text{ m} = 152 \text{ m}$ $\text{No. of poles} = (152\text{m} \div 8\text{m}) + 1 = 19 + 1 = 20 \text{ poles}$				

29.	a. 6 th pattern = 13 blocks b. 10 th pattern
30.	<p>Jen + Liza + Marie = 132</p> $\square + 3\square + 2\square = 132$ $6\square = 132$ $\square = 132 \div 6$ $= 22$ <p>Jen = 22 plums Liza = 22 × 3 = 66 plums Marie = 22 × 2 = 44 plums</p>
31.	<p>Shirt = $\frac{1}{3} \times \frac{\\$720}{1} = \\$240$</p> <p>Book = $\frac{1}{4} \times \frac{\\$480}{1} = \\$120$</p> <p>Saved = \$480 - \$120 = \$360</p>
32.	$\begin{array}{r} 35.7 \\ 1.6 - \\ \hline 34.1 \text{ mins} \end{array}$
33.	<p>Total weight = 47kg × 5 = 235kg</p> <p>4th child + 5th child = 235kg – (60+38+42)</p> <p>4th child + 5th child = 95 kg</p> <p>5th child = (95kg – 9kg) ÷ 2 = 86kg ÷ 2 = 43kg</p> <p>4th child = 43kg + 9 kg = 52kg</p>
34.	<p>a. B and C</p> <p>b. Any one of the following:</p> <ul style="list-style-type: none"> – B has a uniform cross-section while C doesn't. – B has 5 faces and C has 4 faces. – B has 6 vertices and C has 4 vertices.
35.	 <p>Area of A = 24 cm × 4 cm = 96 cm²</p> <p>Area of B = 12 cm × 9 cm = 108 cm² +</p> <p>Total Area = 204 cm²</p>

36.	 <p>Lemons = $\frac{220}{22} \times 6 = 60$</p> <p>Fraction of lemons = $\frac{60}{220} = \frac{3}{11}$</p>
pennacool.com Test 1 - Section 3	
37.	<p>Ripe guavas = $\frac{3}{4} \times \frac{200}{1} = 150$</p> <p>Selling price of ripe guavas = $\frac{150}{10} \times 8 = \\120</p> <p>Selling price of green guavas = 50 × \$3.50 = \$175</p> <p>Total S.P. = \$175 + \$120 = \$295</p> <p>Profit = \$295 - \$175 = \$120</p>
38.	<p>No. of cubes in 1 box = $\frac{60\text{cm} \times 40\text{cm} \times 32\text{cm}}{4\text{cm} \times 4\text{cm} \times 4\text{cm}}$</p> <p>= 1200 cubes</p> <p>No. of boxes = $\frac{2850}{1200} = 3$ boxes</p>
39.	

40.	 <p>a. Tuesday = \$80 + \$25 = \$105</p> <p>b. Total wkly expenditure = \$80 × 5 days = \$400 = Mon+Tues+Wed+Thu+Fri=\$400 = \$80+\$105+3□+□+\$55 = \$400 = \$240 + 4□ = \$400 = 4□ = \$400 - \$240 = \$160 = □ = \$160 ÷ 4 = \$40 Thurs = \$40 Wed = Thurs × 3 = \$40 × 3 = \$120</p>
pennacool.com Test 2 - Section 1	
1.	Six hundred and thirty-nine thousand and forty-seven
2.	6 087.5
3.	29 648
4.	6.8
5.	203
6.	$= \frac{1}{2} + \frac{1}{4} + \frac{5}{8}$ $= \frac{4}{8} + \frac{2}{8} + \frac{5}{8} = \frac{11}{8} = 1\frac{3}{8}$
7.	$\frac{3}{2} \times \frac{48}{1} = \72
8.	\$100.40
9.	
10.	$\$64 \times 2 = \128 10% of \$128 = $\frac{10}{100} \times \frac{128}{1} = \12.80

11.	Sunday
12.	$V = L \times B \times H = 16 \text{ cm} \times 9 \text{ cm} \times 7 \text{ cm} = 1008 \text{ cm}^3$
13.	21
14.	\$49.00
15.	ST
16.	Any one of the following: - A has 2 lines of symmetry whereas B has 0 lines symmetry. - A has 4 right-angles whereas B has none.
17.	$\begin{array}{r} 12:45 \\ :20 + \\ \hline 1:05 \end{array}$
18.	$\frac{30 + \square}{2} = \frac{28 + 34}{2}$ $\frac{30 + \square}{2} = \frac{62}{2}$ $\frac{30 + \square}{2} = 31$ $30 + \square = 31 \times 2$ $30 + \square = 62$ $\square = 62 - 30$ $\square = 32$
19.	Wednesday = $\text{HHH IIII } 9$
20.	Mean = $\frac{\$120 + \$60 + \$90}{3} = \frac{\$270}{3} = \$90$
pennacool.com Test 2 - Section 2	
21.	$= 6\frac{2}{8} - 3\frac{7}{8}$ $= 3\frac{2}{8} - \frac{7}{8} = 2\frac{3}{8}$
22.	$\frac{1}{3}$ of Ken's money = $\frac{1}{3} \times \frac{180}{1} = \60 $\frac{3}{4}$ of Ann's money = \$60 Total of Ann's money = $\frac{\$60 \times 4}{3} = \80.00
23.	8-seaters = $8 \times 20 = 160$ people 20% of 30 = $6 \times 4 = 24$ people Total no. of people in hall = $160 + 24 = 184$ people
24.	$\frac{117}{3} = 39$ The numbers are: $\begin{array}{ccc} 39^{-2} & 39 & 39^{+2} \\ \downarrow & & \downarrow \\ 37 & 39 & 41 \end{array}$

25. 3 cupcakes + 3 ice creams = \$168 - \$108
 1 cupcake + 1 ice cream = \$60 ÷ 3 = \$20
 1 Ice cream = $\frac{\$20 - \$4}{2} = \frac{\$16}{2} = \8
 1 Cupcake = \$8 + \$4 = \$12

26.

Item	Unit Price	Amount	Total Cost
Milk	\$24.00	3	\$72.00
Cheese	\$36.00	2.5 kg	\$90.00
Eggs	\$18 per dz.	30	\$45.00
Total			\$207.00

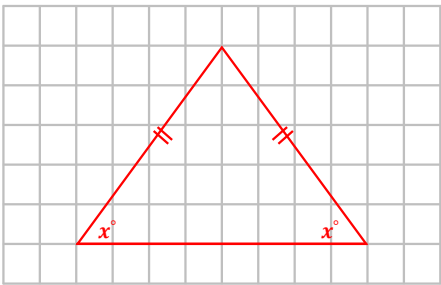
 Eggs = $\frac{\$45}{18} \times 12 = 30$

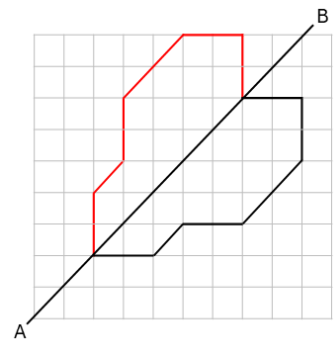
27. K + A + M = \$430
 □ + 4□ + \$85 = \$430
 5□ + \$85 = \$430
 5□ = \$430 - \$85
 □ = \$345 ÷ 5
 = \$69
 Kevin = \$69
 Arya = \$69 × 4 = \$276

28. Boxes already packed = $\frac{150}{30} = 5$ boxes
 He is on the 151st can so he is packing the 6th box

29. SI = $\frac{P \times R \times T}{100} = \frac{9600 \times 6 \times 2}{100} = \1152.00

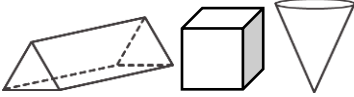
30. Regular time = \$30 × 40 = \$1440
 Overtime = \$1908 - \$1440 = \$468
 No. hrs OT = \$468 ÷ \$72 = 6.5 hours

31. 

32. 

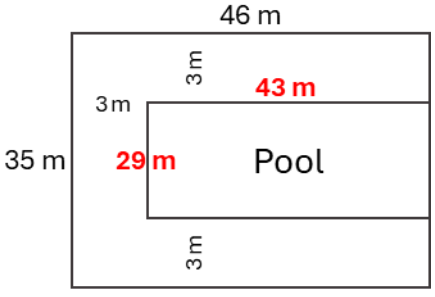
33. Avril = 40
 Levi = 48
 Reena = 36
 Total age = 124 years

34. Lunch = $\frac{1}{6}$
 Book = $\frac{1}{3} \times \frac{5}{6} = \frac{5}{18}$
 Poster = $1 - (\frac{1}{6} + \frac{5}{18})$
 = $\frac{18}{18} - (\frac{3}{18} + \frac{5}{18})$
 = $\frac{18}{18} - \frac{8}{18} = \frac{10}{18} = \frac{5}{9}$
 $\frac{5}{9} = \frac{10}{18} - \frac{5}{18} = \60
 = $\frac{18}{5} \times \frac{60}{1} = \216


35. 

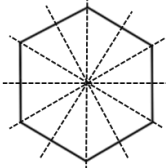
36. a. English = (90 × 4) - (95 + 86 + 91)
 English = 360 - 272 = 88
 b. Total in 5 tests = 92 × 5 = 460
 Mark in 5th test = 460 - 360 = 100
 Yes, she will be able to get a grade A if she scores 100 marks in the 5th test.

pennacool.com Test 2 - Section 3

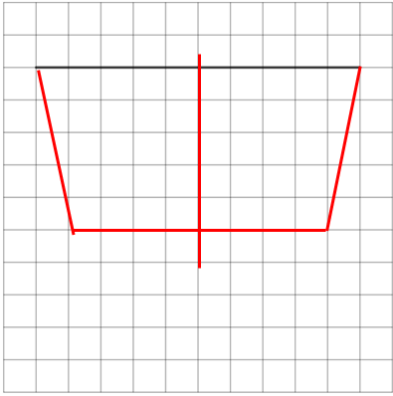
37. 
 Area of border = (46 m × 35 m) - (43 m × 29 m)
 = 1610 m - 1247 m = 363 m²

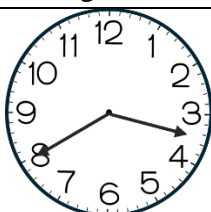
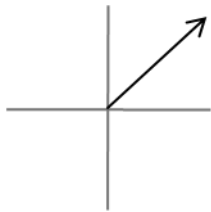

38. Jerseys + balls = $\frac{3}{8} + \frac{1}{4} = \frac{5}{8}$
 Remaining money = $\frac{3}{8} = \$240$
 Total money = $\frac{8}{3} \times \frac{240}{1} = \640
 Money spent on Balls = $\frac{1}{4} \times \frac{640}{1} = \160
 2 balls = \$20 - 3 balls
 Total no. of balls = $\frac{160}{20} \times 3 = 24$ balls

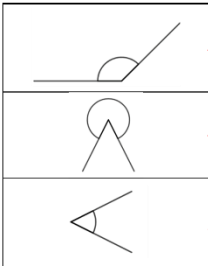
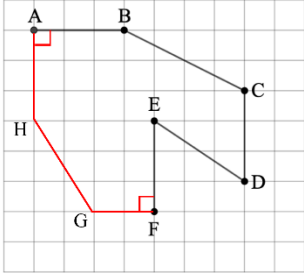
39.	<div></div> <div>6th pattern</div> <p>The pattern was formed by continuously adding match sticks to each of the preceding patterns.</p>
40.	<div>Thursday = $40 \times \\$6.50 = 260.00$</div> <div>Friday = $30 \times \\$5.00 = 150.00$</div> <div>Saturday = $\frac{60}{3} \times \frac{\\$12}{1} = 240.00$</div> <div>Sunday = $\frac{35}{5} \times \frac{\\$9.50}{1} = 66.50 +$</div> <div>Money made for the period = <u>716.50</u></div>
pennacool.com Test 3 - Section 1	
1.	$(3 \times 1000) + (4 \times 100) + (7 \times 1) + (8 \times \frac{1}{10})$
2.	80 000
3.	<div>$\frac{1}{4} = 16 \text{ cm}^2$</div> <div>Area = $16 \times 4 = 64 \text{ cm}^2$</div> <div>Side = $\sqrt{64 \text{ cm}^2} = 8 \text{ cm}$</div>
4.	$20 - (4.9 + 13.2) = 1.9$
5.	<div>$\frac{18 \times 2}{5 \times 2} = \frac{\square}{10}$</div> <div>$\square = 36$</div>
6.	<div>Zuri + Zena = \$140</div> <div><div><div>\$18</div><div>\$61</div><div>\$79</div></div><div><div>\$18 -</div><div>$2 \overline{) \\$122}$</div><div><div>\$61</div></div></div></div>
7.	$\frac{36}{50} = \frac{18}{25} = 0.72$
8.	$\frac{\$245}{\$35} = 7 \text{ of each}$
9.	<div>$\frac{1}{3} \times \frac{36}{1} = 12$</div> <div>$12 - 8 = 4 \text{ more}$</div>
10.	<div>$3 + \frac{2}{3} + 4 + \frac{5}{9}$</div> <div>$= 7 + \frac{2}{3} + \frac{5}{9} = 7 + \frac{6}{9} + \frac{5}{9} = 7 + \frac{11}{9}$</div> <div>$= 7 + 1\frac{2}{9} = 8\frac{2}{9}$</div>
11.	<div>Hrs Mins</div> <div><div><div>10</div><div>11</div></div><div><div>+60</div><div>05</div></div></div> <div><div>9: 10</div><div>-</div></div> <div><div>1: 55</div></div>

12.	
13.	19.7
14.	2 quarter-turns
15.	$12 + 7 + 5 = 24$
16.	Triangular prism
17.	1 eraser = $9 - 7.8 = 1.2$ cm 4 erasers = $1.2 \text{ cm} \times 4 = 4.8$ cm
18.	Chocolate = $10 \times 6 = 60$ Strawberry = $10 \times 2 = 20$ $60 - 20 = 40$ more chocolates than strawberries
19.	Sum = $34 \times 8 = 272$
20.	6
pennacool.com Test 3 - Section 2	
21.	$\begin{array}{r} 1.600 \\ 2.475 - \\ \hline 4.075 \end{array}$
22.	Whole Numbers: $8 - 3 = 5$ Fractions: $\frac{4}{7} - \frac{11}{14} = \frac{8}{14} - \frac{11}{14} = -\frac{3}{14}$ Combined: $5 - \frac{3}{14} = 4\frac{14}{14} - \frac{3}{14} = 4\frac{11}{14}$
23.	$L + B = 72 \text{ cm} \div 2 = 36 \text{ cm}$ $2\Box + \Box = 36 \text{ cm}$ $3\Box = 36 \text{ cm}$ $\Box = 36 \text{ cm} \div 3 = 12 \text{ cm}$ Breadth = 12 cm Length = $12 \times 2 = 24 \text{ cm}$
24.	4 pumpkins = 6.4 kg 1 pumpkin = $6.4 \text{ kg} \div 4 = 1.6 \text{ kg} \approx 2 \text{ kg}$
25.	Mangoes + Pears = \$60 $\begin{array}{r} \$6 \qquad \$2 \qquad \underline{6 -} \\ \qquad + \$6 \qquad 9 \overline{) 54} \\ \hline \qquad \$8 \qquad \qquad 6 \end{array}$ 6 mangoes = $\$6 \times 6 = \36

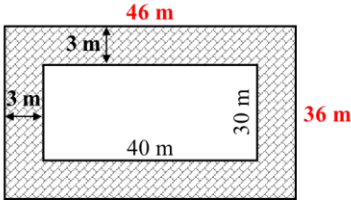
26.	<p>Area of A = $9 \text{ cm} \times 8 \text{ cm} = 72 \text{ cm}^2$ Area of B = $21 \text{ cm} \times 8 \text{ cm} = 168 \text{ cm}^2$ Area of shape = $72 - 168 = 240 \text{ cm}^2$</p>										
27.	<p>a. $L + B = 48 \div 2 = 24 \text{ cm}$</p> <p>b. Area of one square = $2 \text{ cm} \times 2 \text{ cm} = 4 \text{ cm}^2$ Area of rectangle = $(8 \text{ squares} \times 4 \text{ squares}) \times 4 \text{ cm}^2 = 32 \text{ squares} \times 4 = 128 \text{ cm}^2$</p>										
28.	<p>10:45 :20 :45 2:35 + 12:145 12:00 2:25 + 14:25 = 2:25 pm</p> <p>60 1 4 5 2 r 25</p> <p>3 + 6 0 4 : 0 5 2 : 2 5 - 1 : 4 0</p> <p>1 hour 40 mins = $1 \frac{2}{3}$ hours</p>										
29.	<p>Vol = $L \times B \times H = 60 \times 50 \times 40 = 120\,000 \text{ cm}^3$ Vol in Litres = $120\,000 \div 1000 = 120 \text{ litres}$ Total Amt. of water in aquarium = $\frac{3}{4} \times \frac{120}{1} = 90 \text{ L}$</p>										
30.	<p>30 pens + 30 rulers = $(\\$116 + \\$54) \times 3 = \\$170 \times 3 = \\510</p>										
31.	<p>1 space = $(210 \text{ cm} - 90 \text{ cm}) \div 2 = 120 \div 2 = 60 \text{ cm}$ 20 posters = $20 \times 30 = 600 \text{ cm}$ 19 spaces = $19 \times 60 = 1140 \text{ cm}$ Distance from 1st to 20th poster = $600 + 1140 = 1740 \text{ cm} = 17.4 \text{ m}$</p>										
32.	<p>She turned 3 quarter turns</p>										
33.	$\frac{750}{250} \times \frac{45.80}{1} = \137.40										
34.	$SI = \frac{P \times R \times T}{100} = \frac{4800 \times 4 \times 5}{100 \times 1 \times 2} = \480.00										
35.	<p>Discount = $\frac{10}{100} \times \\$8000 = \\800 Discounted price = $\\$8000 - \\$800 = \\$7200$ VAT = $\frac{1}{8} \times \frac{7200}{1} = \\900 Final price = $\\$7200 + \\$900 = \\$8100$</p>										
36.	<p>Total sold = $50 \times 4 = 200$ Tuesday = $200 - (65 + 50 + 30) = 55$</p> <p>Pies sold at Best Pies</p> <table border="1"> <thead> <tr> <th>Day</th> <th>Number of Pies Sold</th> </tr> </thead> <tbody> <tr> <td>Mon</td> <td>65</td> </tr> <tr> <td>Tues</td> <td>55</td> </tr> <tr> <td>Wed</td> <td>50</td> </tr> <tr> <td>Thurs</td> <td>30</td> </tr> </tbody> </table>	Day	Number of Pies Sold	Mon	65	Tues	55	Wed	50	Thurs	30
Day	Number of Pies Sold										
Mon	65										
Tues	55										
Wed	50										
Thurs	30										
pennacool.com Test 3 - Section 3											
37.	<p>Wife = $\frac{1}{3} \times \frac{12600}{1} = \\4200 Mother = $\frac{20}{100} \times \frac{8400}{1} = \\1680 Remainder = $\\$8400 - \\$1680 = \\$6720$ Lana + Lee = $\\$6720$ $3\Box + \Box = 4\Box = \\6720 $\Box = \\$6720 \div 4 = \\1680 Lana = $3 \times \\$1680 = \\5040</p>										

38.	 <p>a. or any variation of this. Line of symmetry should remain the same. Can be any height.</p> <p>b. There are 2 acute and 2 obtuse angles</p>
39.	<p>a. 13 cubes</p> <p>b. Vol of cuboid = $12 \times 10 \times 28 = 3360 \text{ cm}^3$ Vol. of 1 cube = $2 \times 2 \times 2 = 8 \text{ cm}^3$ No. of cubes that can fit = $3360 \div 8 = 420$ cubes No. of cubes in cuboid = 13 No. of cubes needed to fill cuboid = $420 - 13 = 407$ cubes</p>
40.	<p>Sum of 4 matches = $75 \times 4 = 300$ Sum of 6 matches = $83 \times 6 = 498$ $5^{\text{th}} \text{ match} + 6^{\text{th}} \text{ match} = 498 - 300$</p> $\begin{array}{r} 36 \\ 81 \\ \hline 117 \end{array} \quad \begin{array}{r} 81 \\ 36 \\ \hline 117 \end{array}$ <p>$5^{\text{th}} \text{ match} = 117, 6^{\text{th}} \text{ match} = 81$</p>
pennacool.com Test 4 - Section 1	
1.	Six hundred and forty-eight thousand, two hundred and seventeen
2.	$4\frac{19}{20}$
3.	boys = $\frac{15}{40} = \frac{3}{8}$
4.	0.637, 0.376, 0.367, 0.359
5.	$40 \times 7 = 280$ minutes $\frac{280}{60} = 4\frac{2}{3}$
6.	$14 \times 4 = 56$
7.	$2\frac{2}{3} + 6\frac{5}{6} \rightarrow$ Add whole numbers: $2 + 6 = 8$ Add fractions: $\frac{4}{6} + \frac{5}{6} = \frac{9}{6} = 1\frac{1}{2}$ $8 + 1\frac{1}{2} = 9\frac{1}{2}$

8.	$\frac{2750g}{25g} = 110 \text{ packets}$																														
9.	Selling Price = \$14.85 - \$3.90 = \$10.95																														
10.																															
11.	<table><tr><th>Hrs</th><th>Mins</th><th></th><th>Hrs</th><th>Mins</th></tr><tr><td>7</td><td>8</td><td>$+60$</td><td>7</td><td>75</td></tr><tr><td>7</td><td>: 15</td><td>\rightarrow</td><td>7</td><td>: 75</td></tr><tr><td>6 : 30</td><td>-</td><td></td><td>6 : 30</td><td>-</td></tr><tr><td>_____</td><td></td><td></td><td>_____</td><td></td></tr><tr><td></td><td></td><td></td><td>1 : 45</td><td></td></tr></table> or 1 $\frac{3}{4}$ hours	Hrs	Mins		Hrs	Mins	7	8	$+60$	7	75	7	: 15	\rightarrow	7	: 75	6 : 30	-		6 : 30	-	_____			_____					1 : 45	
Hrs	Mins		Hrs	Mins																											
7	8	$+60$	7	75																											
7	: 15	\rightarrow	7	: 75																											
6 : 30	-		6 : 30	-																											
_____			_____																												
			1 : 45																												
12.	$8\frac{3}{5} \text{ kg} = 8 \text{ kg } 600 \text{ g}$ $8600 \text{ g} - 6975 \text{ g} = 1625 \text{ g} = 1 \text{ kg } 625 \text{ g}$																														
13.																															
14.	Area of 1 sq = $2 \text{ cm} \times 2 \text{ cm} = 4 \text{ cm}^2$ Area of $10\frac{1}{2}$ sq = $10\frac{1}{2} \times 4 \text{ cm}^2 = 42 \text{ cm}^2$																														
15.	Triangular-based pyramid																														
16.	<table><tr><td>16</td><td>25</td><td>36</td><td>49</td><td>64</td></tr><tr><td>\uparrow</td><td>\uparrow</td><td>\uparrow</td><td>\uparrow</td><td>\uparrow</td></tr><tr><td>4^2</td><td>5^2</td><td>6^2</td><td>7^2</td><td>8^2</td></tr></table>	16	25	36	49	64	\uparrow	\uparrow	\uparrow	\uparrow	\uparrow	4^2	5^2	6^2	7^2	8^2															
16	25	36	49	64																											
\uparrow	\uparrow	\uparrow	\uparrow	\uparrow																											
4^2	5^2	6^2	7^2	8^2																											
17.	$V = (s)^3 = 7^3 = 343 \text{ cm}^3$																														
18.	Watermelon																														
19.	D																														
20.																															
pennacool.com Test 4 - Section 2																															
21.	Area = 144 m^2 Side = $\sqrt{A} = \sqrt{144} = 12 \text{ m}$ Perimeter = $12 \text{ m} \times 4 = 48 \text{ m}$																														
22.	Trays = $\frac{240}{12+8} = \frac{240}{20} = 12$ of each tray type Total no. of trays needed = $12 \times 2 = 24$ trays																														
23.	No. of pieces = $1050 \text{ cm} \div 50 \text{ cm} = 21$ pieces Money earned. = $21 \times \$12.25 = \257.25																														

24.	$0.4 = \frac{4}{10} = \frac{2}{5}$ Whole amt. = $60 \times \frac{5}{2} = 150$ $70\% \times 150 = \frac{70}{100} \times \frac{150}{1} = 105$
25.	$V = (s)^3 = (3 \text{ cm})^3 = 27 \text{ cm}^3$ No. of cubes in cuboid = $5 \times 2 \times 2 = 20$ cubes Volume of cuboid = $20 \times 27 \text{ cm}^3 = 540 \text{ cm}^3$
26.	Three quarters are shaded in A and 6 eighths are shaded in B. When $\frac{3}{4}$ is expressed as eighths, it is equal to $\frac{6}{8}$.
27.	Let 1 ring = R, let 1 bracelet = 3R 1 ring + 1 bracelet = R + 3R 2 rings + 2 bracelets = \$128 $\rightarrow 2R + 6R = \$128$ $\rightarrow 8R = \$128$ $\rightarrow R = \$128 \div 8 = \16 Bracelet = $3R = 3 \times 16 = \$48$ Difference = $\$48 - \$16 = \$32$
28.	A to B = $6.4 \text{ km} = \frac{5}{8}$ A to C = $\frac{6.4}{5} \times 8 = 10.24 \text{ km}$
29.	Marbles lost = $\frac{1}{3}$ Fraction given to Joe = $\frac{1}{4} \times \frac{2}{3} = \frac{1}{6}$ He remained w/ = $1 - (\frac{1}{3} + \frac{1}{6}) = 1 - \frac{3}{6} = 1 - \frac{1}{2} = \frac{1}{2}$ $\frac{1}{2} = 48$ Total marbles = $48 \times 2 = 96$ marbles
30.	Length of pool = $A \div W = 450 \text{ m}^2 \div 15 = 30 \text{ m}$ Length of garden = $30 \text{ m} \times 2 = 60 \text{ m}$ Length of backyard = $60 + 30 = 90 \text{ m}$ $P = (L + B) \times 2 = (90 + 15) \times 2 = 105 \times 2 = 210 \text{ m}$
31.	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;"> <p style="text-align: center;">A</p>  </div> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;"> <p style="text-align: center;">B</p> <p style="text-align: center;">Less than a quarter-turn</p> <p style="text-align: center;">More than a quarter-turn</p> <p style="text-align: center;">More than a half-turn</p> </div> </div>
32.	No of boxes bought = $\$360 \div \$40 = 9$ boxes 9 boxes = 45 cupcakes 1 box = $45 \text{ cupcakes} \div 9 \text{ boxes} = 5$ cupcakes No. of cookies in 1 box = $5 + 4 = 9$ cookies
33.	Seats occupied = $\frac{80}{100} \times \frac{640}{1} = 512$ seats Money earned = $512 \times \$45 = \$23\,040.00$
34.	Total marks = $80 \times 3 = 240$ marks Let Levi = L, Kera = 3L and Jason = $2(3L) = 6L$ Levi + Kera + Jason = 240 marks $L + 3L + 6L = 240$ $10L = 240$ $L = 240 \div 10 = 24$ marks Therefore: Levi = 24 marks Kera = $24 \times 3 = 72$ marks Jason = $24 \times 6 = 144$ marks
35.	 <p>or any eight-sided figure with only two right angles.</p>
36.	Total flowers = $90 + 80 + 70 = 240$ % of flowers sold that are roses = $\frac{90}{240} \times \frac{100}{1} = 37\frac{1}{2}\%$
pennacool.com Test 4 - Section 3	
37.	1 necklace = 4 bracelets 2 necklaces = 8 bracelets 5 necklaces + 8 bracelets = \$560 5 necklaces + 2 necklaces = \$560 7 necklaces = \$560 1 necklace = $\$560 \div 7 = \80 1 bracelet = $\$80 \div 4 = \20 3 necklaces = $\$80 \times 3 = \240 6 bracelets = $\$20 \times 6 = \120 Total = $\$240 + \$120 = \$360$

38.

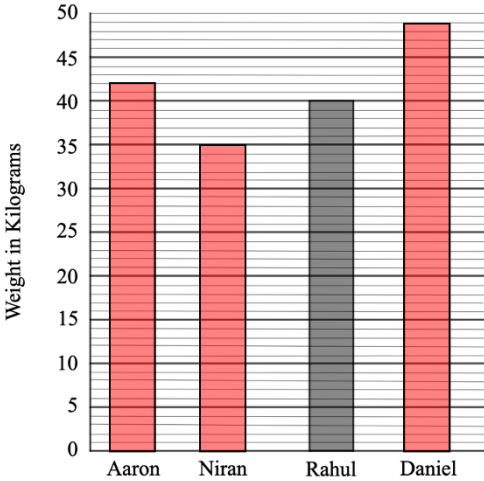


Area of pool = $30 \text{ m} \times 40 \text{ m} = 1200 \text{ m}^2$
 Area of border = $(46 \text{ m} \times 36 \text{ m}) - \text{area of pool}$
 $= 1656 \text{ m}^2 - 1200 \text{ m}^2 = 456 \text{ m}^2$
 Diff = $1200 \text{ m}^2 - 456 \text{ m}^2 = 744 \text{ m}^2$

39.

a. A = Rhombus, B = parallelogram
 b. similarity = both have 2 pairs of parallel lines/ 4 sides/are quadrilaterals
 c. difference = A has 4 equal sides / 2 lines of symmetry whereas B has 0 lines of symmetry

40.




Weight in Kilograms

i. Niran = $40 - 5 = 35 \text{ kg}$
 ii. Daniel = $\left(\frac{40}{100} \times \frac{35}{1}\right) + 35 = 14 + 35 = 49 \text{ kg}$
 iii. Aaron = $\frac{35+49}{2} = \frac{84}{2} = 42 \text{ kg}$

pennacool.com Test 5 - Section 1

1.	80 088
2.	6.9
3.	600 000
4.	4
5.	308
6.	$6\frac{2}{7}$
7.	$\frac{65}{100} = \frac{13}{20}$
8.	$\frac{4}{5} \times \frac{360}{1} = 288$
9.	$66\frac{2}{3}\%$

10.



11. $7.1 - 2.4 = 4.7 \text{ cm}$

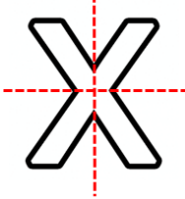
12. $\frac{280}{20} = 14 \text{ pieces}$

13. $1 \text{ sq} = 2 \times 2 = 4 \text{ cm}^2$
 Area of shape = $4 \text{ cm}^2 \times \text{no. of sq in shape}$
 $= 4 \text{ cm}^2 \times 14.5 = 58 \text{ cm}^2$

14. 1 quarter-turn in an anti-clockwise direction

15. Jane = 165 cm
 Reese = 149 cm
 Diff = $165 - 149 = 16 \text{ cm}$

16.



17. The solid is a **pyramid** because it does not have a uniform cross-section.

18. Sum of 4 numbers = $24 \times 4 = 96$
 Missing number = $96 - (28 + 18 + 21) = 96 - 68 = 28$

19. Science

20. Pineapple = 8
 Sapodilla = IIII IIII II

pennacool.com Test 5 - Section 2

21.

$$\frac{2}{3} \times 66 = \square^2 + 8$$

$$44 = \square^2 + 8$$

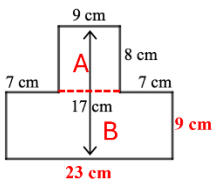
$$44 - 8 = \square^2$$

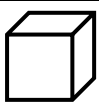
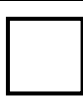
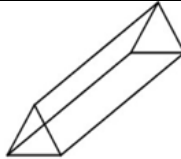

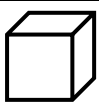
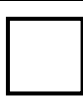
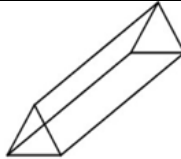

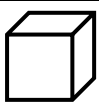
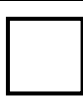
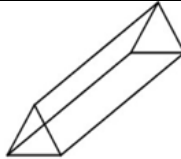

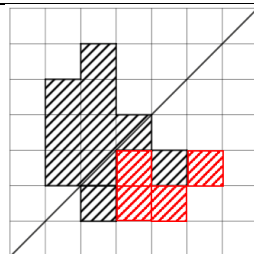
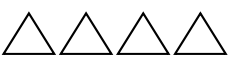
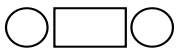

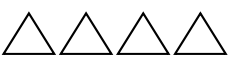
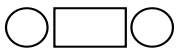

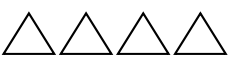
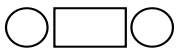

$$36 = \square^2$$

$$\square = \sqrt{36} = 6$$

22. Leah = $\frac{108}{18} \times \frac{4}{1} = 24 \text{ sweets}$
 Zavid = $\frac{108}{18} \times \frac{8}{1} = 48 \text{ sweets}$
 Taj = $\frac{108}{18} \times \frac{6}{1} = 36 \text{ sweets}$

23. His answer is incorrect. Frank added the numerators and denominators together. He should have converted $\frac{3}{4}$ to twelfths, which is $\frac{9}{12}$.

	then add only the numerators: $\frac{9}{12} + \frac{7}{12} = \frac{16}{12}$. The total then has to be changed to a mixed number and reduced to the lowest term: $\frac{16}{12} = 1\frac{4}{12} = 1\frac{1}{3}$
24.	<p>Sweetie Pie = $\frac{48}{4} \times \frac{25}{1} = \\300</p> <p>Nifty's Delights = $\frac{48}{3} \times \frac{19}{1} = \\304</p> <p>Sweetie Pie is cheaper by \$4.00</p>
25.	<p>Marbles lost on Mon. = $\frac{1}{8}$</p> <p>Rem = $\frac{7}{8}$</p> <p>Marbles lost on Tues. = $\frac{1}{2} \times \frac{7}{8} = \frac{7}{16}$</p> <p>No. kept = $1 - (\frac{1}{8} + \frac{7}{16}) = 1 - (\frac{2}{16} + \frac{7}{16}) = \frac{16}{16} - \frac{9}{16} = \frac{7}{16}$</p>
26.	<p>Perimeter = $(L + B) \times 2 = (750 \text{ m} + 300 \text{ m}) \times 2 = 1050 \text{ m} \times 2 = 2100 \text{ m}$</p> <p>Perimeter minus space for gate = $2100 - 30 = 2070 \text{ m}$</p> <p>No. of trees = $(\frac{2070 \text{ m}}{30 \text{ m}}) + 1 = 69 + 1 = 70$ palm trees</p>
27.	<p>Laura = $3\square$</p> <p>Sasha = $3\square + 5$</p> <p>Ria = \square</p> <p>$7\square + 15 = 330$</p> <p>$7\square = 330 - 15$</p> <p>$7\square = 315$</p> <p>$\square = 315 \div 7$</p> <p>$= 45$</p> <p>Laura = $45 \times 3 = 135$</p> <p>Sasha = $135 + 15 = 150$</p> <p>Ria = 45</p>
28.	<p>Marked price = \$2000</p> <p>Discount = $\frac{10}{100} \times \frac{2000}{1} = \\200</p> <p>Discounted price = \$1800</p> <p>VAT = $\frac{1}{8} \times \frac{1800}{1} = \\225</p> <p>Final Price = $\\$1800 + \\$225 = \\$2025$</p>
29.	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Area of A = $9 \times 8 = 72 \text{ cm}^2$</p> <p>Area of B = $23 \times 9 = 207 \text{ cm}^2$</p> <p>Total Area = A + B = $72 + 207 = 279 \text{ cm}^2$</p> </div> </div>
30.	(a) EF (b) perpendicular

31.	<table border="1"> <thead> <tr> <th>Shape</th><th>Cross Section</th></tr> </thead> <tbody> <tr> <td></td><td></td></tr> <tr> <td></td><td></td></tr> </tbody> </table>	Shape	Cross Section						
Shape	Cross Section								
									
									
32.	<p>Sum of 5 tests = $85 \times 5 = 425$</p> <p>Sum of 7 tests = $82 \times 7 = 574$</p> <p>Sum of 6th and 7th test = $574 - 425 = 149$</p> <p>7th test = $(149 - 7) \div 2 = 142 \div 2 = 71$ marks</p> <p>6th test = $71 + 7 = 78$ marks</p>								
33.	<p>150 cookies = $\frac{150}{25} \times 24 = 144$ mins</p> <p>Half hour break = 30 mins</p> <p>Time taken = 144 mins + 30 mins</p> <p>$= 174 \text{ mins} = 2 \text{ hrs } 54 \text{ mins}$</p> <p>Time she will end = 10 hrs 50 mins + 2 hrs 54 mins = 13 hrs 44 minutes = 1:44 pm</p>								
34.									
35.	<p>a) Mean = Sum \div Quantity</p> <p>$= \frac{80 + 30 + 48 + 86 + 76}{5} = 64$ tickets</p> <p>b) $\frac{60}{100} \times \frac{80}{1} = 3$ classes</p>								
36.	<table border="1"> <thead> <tr> <th>Faces</th><th>Name of Solid</th></tr> </thead> <tbody> <tr> <td></td><td>Triangular-based pyramid</td></tr> <tr> <td></td><td>Cylinder</td></tr> <tr> <td></td><td>Triangular prism</td></tr> </tbody> </table>	Faces	Name of Solid		Triangular-based pyramid		Cylinder		Triangular prism
Faces	Name of Solid								
	Triangular-based pyramid								
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pennacool.com Test 5 - Section 3									
37.	<p>1 tyre = \$760</p> <p>1st discount = $\frac{20}{100} \times \frac{760}{1} = \\152</p> <p>Discounted price = $760 - 152 = \\$608$</p> <p>2nd discount = $\frac{10}{100} \times \frac{608}{1} = \\60.80</p> <p>Price of 1 tyre = $\\$608 - \\$60.80 = \\$542.20$</p> <p>4 tyres = $\\$542.20 \times 4 = \\2188.80</p>								

38.

a.

Pos.	1	2	3	4	5	6
Turn		$\frac{1}{4}$ turn	$\frac{1}{2}$ turn	$\frac{3}{4}$ turn	1 turn	$1\frac{1}{4}$ turn

The arrow's movement is increasing by $\frac{1}{4}$ with each turn.

b. After the 7th turn

39. Size of 1 space:
 4 poles = $15\text{cm} \times 4 = 60\text{ cm}$
 3 spaces = $4.2\text{ m} - 60\text{ cm} = 420 - 60 = 360\text{ cm}$
 1 space = $360\text{ cm} \div 3 = 120\text{ cm}$
 25 poles = $25 \times 15\text{ cm} = 375\text{ cm}$
 24 spaces = $120\text{ cm} \times 24 = 2880\text{ cm}$
 Total = $2880 + 375 = 3255\text{ cm} = 32.55\text{ m}$

40.

Category	Expenditure (\$)
Rent	900
Food	1400
Transport	700
Entertainment	900
Bills	900
Savings	1200

Rent + Food + Transport = $\$6000 - (900 + 900 + 1200) = \$6000 - \$3000 = \3000
 Let Transport = \square
 Therefore, Food = $2\square$
 And Rent = $2\square - 500$
Rent + Food + Transport = \$3000
 $2\square - 500 + 2\square + \square = \3000
 $5\square - 500 = \$3000$

5 \square = $\$3000 + \$500 = \$3500$
 $\square = \$3500 \div 5 = \700
 Transport = $\$700$
 Food = $\$700 \times 2 = \1400
 Rent = $\$1400 - \$500 = \$900$

pennacool.com Test 6 - Section 1

1. $(3 \times 10\,000) + (6 \times 1\,000) + (8 \times 10) + (5 \times 1)$

2. 6 tenths

3. Any of the following: 16, 24, 32, 40, 48, 56 etc.

4.

$$\begin{array}{r} 6.8 \\ 4.7+ \\ \hline 11.5 \end{array}$$

5. $\frac{13}{4} \div \frac{1}{8} = \frac{13}{4} \times \frac{8}{1} = 26$

6. $\frac{9}{10} \times \frac{100}{1} = 45\%$

7. 3.75

8.

\$100	\$50	\$20	\$10	\$5	\$1	25¢	10¢	5¢
4	1	1	-	1	1	3	-	1

9. No. of 200 g boxes needed = $\left(\frac{1600\text{g}}{200\text{g}}\right) - 1 = 7$

10. $\frac{25}{100} \times \frac{17}{1} = \4.25

11. $6000\text{ ml} \div 250\text{ ml} = 24\text{ glasses}$

12. No. of boxes = $248 \div 18 = 13\text{ rem } 14 = 14\text{ boxes}$

13. 11 cubes

14. 3rd December

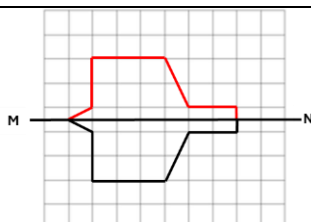
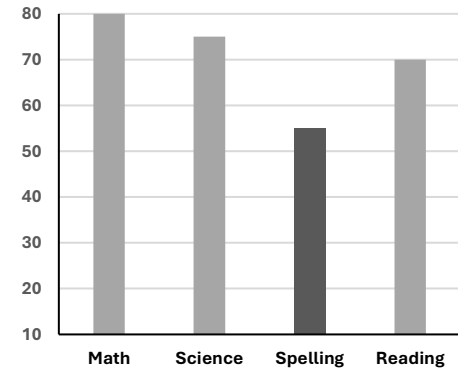
15.

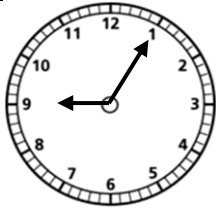
16. The arrow made 3 quarter-turns in a clockwise direction to get from A to B.

17.

$$\begin{array}{r} \overset{+60}{\cancel{6}} : 27 = 87 \\ 1 : 30 - \\ \hline 4 : 57 \end{array}$$

18. Mean = $\frac{16+24}{2} = \frac{40}{2} = 20$
 $19 + 26 + \square = 20 \times 3 = 60$
 $45 + \square = 60$
 $\square = 60 - 45 = 15$

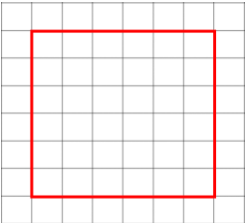
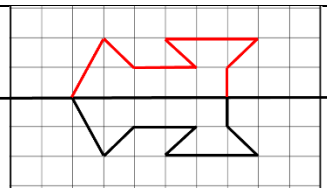

19.	
20.	Money Spent = \$20 - \$11 = \$9 No. of plums = \$9 ÷ \$1.50 = 6 plums
pennacool.com Test 6 - Section 2	
21.	$\square^2 = (160 \div 2) - 16$ $\square^2 = 80 - 16 = 64$ $\square^2 = \sqrt{64} = 8$
22.	4 guavas = \$88 - (\$12 × 6) = \$88 - \$72 = \$16 1 guava = \$16 ÷ 4 = \$4.00
23.	Area = $16 \text{ cm}^2 \times 4 = 64 \text{ cm}^2$ Perimeter = $\sqrt{A} \times 4 = \sqrt{64} \times 4 = 8 \times 4 = 32 \text{ cm}$
24.	
25.	3 balls = \$24 No. of balls = $\frac{\$192}{\$24} \times 4 = 32$ balls
26.	Home to store = 5.2 km × 3 = 15.6 km Home to school = 15.6 km - 5.2 km = 10.4 km
27.	60 - 15 = 45 children No. of pencils extra = 45 × 5 = 255 pencils 15 children = 255 pencils 1 child = $\frac{255}{15} = 15$ pencils
28.	Regular time = \$30 × \$35 = \$1050 Overtime = \$45 × 12 = \$450 Weekly salary = \$1050 + \$450 = \$1590
29.	1 shelf = (386 - 34) ÷ 11 = 352 ÷ 11 = 32 books
30.	tiles = $\frac{9.6 \text{ m} \times 8 \text{ m}}{40 \text{ cm} \times 40 \text{ cm}} = \frac{960 \text{ cm} \times 800 \text{ cm}}{40 \text{ cm} \times 40 \text{ cm}} = 480$ tiles
31.	Similarity - 2 acute and 2 obtuse angles - both are quadrilaterals Difference - A has 0 lines of symmetry; B has 1 line of symmetry
32.	$1^{\text{st}} \square + 2^{\text{nd}} \square = 72 \text{ cm}^3$ $\square + 8\square = 72 \text{ cm}^3$ $9\square = 72 \text{ cm}^3$ $\square = \frac{72}{9} = 8 \text{ cm}^3$ $1^{\text{st}} \text{ cube} = 8 \text{ cm}^3$ $2^{\text{nd}} \text{ cube} = 8 \text{ cm}^3 \times 8 = 64 \text{ cm}^3$ Side of $2^{\text{nd}} \text{ cube} = \sqrt[3]{64} = 4 \text{ cm}$
33.	1. Approximate the cost of 1 folder and 1 notebook to the nearest dollar: 1 folder = \$3.76 ≈ \$4.00 1 notebook = \$12.20 ≈ \$12.00 2. Find the cost of 9 folders and 9 notebooks: 9 folders = 9 × 4 = \$36 9 notebooks = 9 × \$12 = \$108 Total = \$36 + \$108 = \$144 3. Approximate cost is \$144 which means he has enough money.
34.	L = 16 cm $B = \frac{3}{4} \times \frac{16}{1} = 12 \text{ cm}$ Perimeter = (L + B) × 2 = (16 + 12) × 2 = 28 cm × 2 = 56 cm
35.	Spelling = (70 × 4) - (80 + 75 + 70) = 280 - 225 = 55 marks 
36.	$8 \uparrow = 80$ $\uparrow = 80 \div 8 = 10$ Total candies sold = 10 × 20 = 200 Ian sold = 40 Fraction = $\frac{40}{200} = \frac{1}{5}$
pennacool.com Test 6 - Section 3	
37.	$1^{\text{st}} + 2^{\text{nd}} + 3^{\text{rd}} + 4^{\text{th}} = 1$ $= \frac{1}{4} + \frac{1}{8} + 2\square + \square = 1$ $\frac{3}{8} + 3\square = 1$ $3\square = 1 - \frac{3}{8} = \frac{5}{8}$ $\square = \frac{5}{8} \div 3 = \frac{5}{8} \times \frac{1}{3} = \frac{5}{24}$ $3^{\text{rd}} = 2 \times \frac{5}{24} = \frac{5}{12}$ $4^{\text{th}} = \frac{5}{24}$ Total = $\frac{12}{5} \times \frac{120}{1} = \288

38.	$\text{Bank WI SI} = \frac{P \times R \times T}{100} = \frac{8000 \times 6 \times 2}{100} = \960 $\text{Savings Plus SI} = \frac{P \times R \times T}{100} = \frac{8000 \times 4 \times 4}{100} = \1280 He should take the loan from Bank WI since he would have to repay less interest.							
39.	Figure No.	1	2	3	4	5	6	7
	No. of Black dots	1	2	3	4	5	6	7
	No. of White dots	6	10	14	18	22	26	30
	Total no. of dots	7	12	17	22	27	32	37
	b. 14 th figure							
40.	Mean of Karen, Amaya + Ria $= \frac{\$95 + \$75 + \$70}{3} = 240 \div 3 = \80 Sim + Cin = $(\$80 + \$40) \times 2$ $= \$120 \times 2 = \240 Simran = $(\$240 - \$56) \div 2 = 184 \div 2 = \92 Cintra = $\$92 + \$56 = \$148$							
pennacool.com Test 7 - Section 1								
1.	One hundred and sixty-three thousand, two hundred and forty-seven							
2.	5.76							
3.	<							
4.	3.37							
5.	$\frac{8}{5} \times \frac{80}{1} = 256 = \frac{1}{2} \times 256 = 128$							
6.	3568							
7.	36							
8.	$6\frac{1}{8}$							
9.	$2\frac{7}{8}$							
10.	63							
11.	5 vertices							
12.	\$5							
13.	metres							
14.	$\frac{7200}{30} = 240$ packets							
15.	<div></div> <div>$\begin{array}{r} 8:30 \\ + :35 \\ \hline 9:05 \end{array}$</div>							
16.	A = $8.6 - 7.6 = 1.0$ B = $10.5 - 9.8 = 0.7$ Difference = $1 - 0.7 = 0.3$							


17.	D
18.	4
19.	36
20.	$\frac{108 \text{ students}}{18 \text{ blocks}} = 6 \text{ students}$
pennacool.com Test 7 - Section 2	
21.	$3\frac{3}{6} + 4\frac{5}{6} = 7\frac{8}{6} = 1\frac{1}{3}$ $= 7 + 1\frac{1}{3} = 8\frac{1}{3}$ $= 10 - 8\frac{1}{3}$ $= 1\frac{2}{3}$
22.	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px 10px;">8</div> <div style="border: 1px solid black; padding: 2px 10px;">6</div> </div> <div>OR</div> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 2px 10px;">9</div> <div style="border: 1px solid black; padding: 2px 10px;">6</div> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> $+ \begin{array}{ c c } \hline 9 & 4 \\ \hline \end{array}$ $\underline{\hspace{1cm}}$ <p>1 8 0</p> </div> <div style="text-align: center;"> $+ \begin{array}{ c c } \hline 8 & 4 \\ \hline \end{array}$ $\underline{\hspace{1cm}}$ <p>1 8 0</p> </div> </div>
23.	$\begin{array}{r} 4.8 \\ + 7.6 \\ \hline 2 \overline{)12.4} \\ \hline 6.2 \end{array}$
24.	<p>1 pen + 1 ruler = \$4.25</p> <p>No. of each = $\\$34 \div \\4.25</p> <p>= 8 sets</p>
25.	<p>1st year = 10% of \$9600 = \$960</p> <p>Salary = \$9600</p> $\begin{array}{r} 960 + \\ \hline \$10560 \end{array}$ <p>2nd year = $\frac{10}{100} \times 10560$</p> <p>= \$1056</p> <p>Salary = \$10560 + 1056 = \$11 616</p> <p>3rd year = $\frac{10}{100} \times 11\,616$</p> <p>= \$1 161.60</p> <p>Salary = \$11 616 + \$1 161.60 = \$12 777.60</p>
26.	<p>Spent $\frac{2}{5} + \frac{3}{10} = \frac{7}{10}$</p> <p>Remained with = $\frac{3}{10} = \\$180$</p> <p>Total = $\frac{10}{3} \times \frac{180}{1}$</p> <p>= \$600</p>
27.	$6\frac{1}{3}, 3\frac{5}{6}$ and $1\frac{5}{6}$

28.	$8 \text{ sets of } 5 = \$12.50 \times 8$ $= \$100.00$ $3 \text{ apples} = \$3 \times 3 = \$9.00 = \$109.00$
29.	B shows $\frac{2}{3}$ shaded which is equivalent to $\frac{8}{12}$. C shows $\frac{8}{12}$ shaded. Therefore, B and C are equivalent or equal.
30.	$\text{Sets of } 10 = \frac{60}{100} \times \frac{28}{1}$ $= \$168.00$ $\text{Individually} = 60 \times \4.50 $= \$270$ $\text{Amt. saved} = \$270 - \$168 = \$102$
31.	$\text{School} \rightarrow \text{Church} = \frac{6.4}{5} = 1.28 \text{ km}$ $\text{Home to school} = 6.4 - 1.28 = 5.12 \text{ km}$
32.	$1 \text{ set} = 6 + 5 + 4 = 15 \text{ sticks}$ $\text{Orange} = \frac{240}{15} \times \frac{6}{1} = 96$ $\text{Blue} = \frac{240}{15} \times 5 = 80$ $\text{Green} = \frac{240}{15} \times \frac{4}{1} = 64$
33.	$\text{Volume} = L \times B \times H$ $= 80 \text{ cm} \times 40 \text{ cm} \times 60 \text{ cm}$ $= 192000 \text{ cm}^3$ $= 192 \text{ litres}$ $\text{No. of bottles} = 192 \div 1\frac{1}{5} = \frac{192}{1} \div \frac{6}{5}$ $= \frac{192}{1} \times \frac{5}{6}$ $= 160 \text{ bottles}$
34.	

35.	<div><div><div><div>L + B = 80 ÷ 2 = 40</div><div>8 cm 16 cm</div><div>+ 16 cm</div><div>24 cm</div></div><div><div>2</div><div><div>+ 8</div><div>32</div></div><div>16</div></div></div><div>Area = L × B = 24 cm × 16 cm = 384 cm³</div></div>																						
36.	<div>Overall mean = $\frac{(75 \times 3) + (80 \times 2)}{5}$</div> <div>$= \frac{225 + 180}{5}$</div> <div>$= \frac{385}{5} = 77$</div> <div>Carlos earned a C.</div>																						
pennacool.com Test 7 - Section 3																							
37.	<div>2 gloves = \$249 - \$179 = \$70</div> <div>1 glove = \$70 ÷ 2 = \$35</div> <div>2 bats + 2 balls = \$179 - \$35 = \$144</div> <div>1 bat + 1 ball = \$144 ÷ 2 = \$72</div> <div>5 □ + □ = \$72</div> <div>6 □ = \$72</div> <div>□ = \$72 ÷ 6</div> <div>= \$12</div> <div>Bat = 5 □ = \$12 × 5 = \$60</div> <div>Ball = □ = \$12.00</div>																						
38.	<div>Area of:</div> <div>A = 9cm × 6cm = 54cm²</div> <div>B = 8cm × 5cm = 40cm²</div> <div>C = 23cm × 13cm = 299cm²</div> <div>Total area = 393cm²</div>																						
39.	<div><table><tr><td>Figure</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr><tr><td>Match sticks</td><td>12</td><td>19</td><td>26</td><td>33</td><td>40</td><td>47</td><td>54</td><td>61</td><td>68</td><td>75</td></tr></table></div> <div>a.</div> <div>b. The pattern was formed by continuously adding 7 matchsticks to the preceding figure.</div>	Figure	1	2	3	4	5	6	7	8	9	10	Match sticks	12	19	26	33	40	47	54	61	68	75
Figure	1	2	3	4	5	6	7	8	9	10													
Match sticks	12	19	26	33	40	47	54	61	68	75													
40.	<div><div><div><div><div>80</div><div>70</div><div>60</div><div>50</div><div>40</div><div>30</div><div>20</div><div>10</div><div>0</div></div><div><div>Time Taken in minutes</div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>Matt</div><div>Sunil</div><div>Lee</div><div>Randy</div><div>Leeann</div></div></div></div><div>a. Leeann = (45×5) - (30+65+50+35)</div><div>= 225 - 180</div><div>= 45 minutes</div><div>b. Lee</div></div>																						

pennacool.com Test 8 - Section 1	
1.	6 tenths
2.	33.84
3.	$\frac{10}{16} = \frac{5}{8}$
4.	$7 - 3\frac{4}{7} = 3\frac{3}{7}$
5.	\$57.00
6.	3
7.	607
8.	$\frac{84}{100} = \frac{21}{25}$
9.	$4\frac{3}{4}$ kg = 4750g
10.	45 minutes
11.	Side = $\sqrt{144 \text{ cm}^2} = 12 \text{ cm}$ Side = $12 \text{ cm} \div 2 = 6 \text{ squares}$  Or any square with a side of 6 squares
12.	A
13.	1983
14.	$\begin{array}{r} 7.9 \\ + .4 \\ \hline 8.3 \end{array}$
15.	Obtuse angle / greater than a quarter turn
16.	
17.	Longer = 7.2 Shorter = $7.2 \text{ cm} - 2.8 \text{ cm} - 4.4 \text{ cm}$ Total = $7.2 + 4.4 = 11.6 \text{ cm}$
18.	Mean = $\frac{79+121+86+74+95}{5} = 91$
19.	
20.	Remained = $\frac{3}{8} \times \frac{40}{1} = \$15 \rightarrow \text{Thursday}$

pennacool.com Test 8 - Section 2	
21.	$\begin{array}{r} 9 \quad 6 \quad 3 \quad 8 \\ - 6 \quad 7 \quad \boxed{5} \quad 9 \\ \hline 2 \quad \boxed{8} \quad 7 \quad 9 \end{array}$
22.	$\frac{75}{100} \times \frac{28}{1} = 21 \text{ boys}$
23.	4 apples + 4 pears = $\$11 \times 4 = \44 4 pears = $\$64 - \44 4 pears = $\$20$ 1 pear = $\$20 \div 4 = \5
24.	Discount = $\frac{\$475}{\$25} \times \frac{4}{1}$ = $\$76$ Price paid = $\$475 - \76 = $\$399.00$
25.	Ria = $\frac{40}{100} \times \frac{1280}{1} = \512 Price paid = $\$1280 - \$512 = \$768$ Lorrie = $\frac{\$1280}{\$50} = 25 \text{ sets and } \30 remainder = $\$20 \times 25 \text{ sets} = \500 Price paid = $\$1280 - \$500 = \$780$ Ria got the better deal. She paid \$12 less.
26.	Regular time = $\$40 \times 36 = \1440 Overtime = $\$510 \div \60 = $8\frac{1}{2}$ Total no of hours = $36 + 8\frac{1}{2} = 44\frac{1}{2} \text{ hours}$
27.	No of each = $336 \div 14 = 24$ Total no needed = $24 + 24 = 48 \text{ boxes}$
28.	SI = $\frac{P \times R \times T}{100} = \frac{7200 \times 8 \times 7}{100 \times 3} = \1344 Total = $\$7200 + \$1344 = \$8544$
29.	Pawpaw + Guava = 2600 g $4 \square + \square = 2600$ $5 \square = 2600$ $\square = 2600 \div 5$ = 520 g 1 pawpaw = $520 \text{ g} \times 4 = 2080 \text{ g}$ 3 pawpaw = $2080 \text{ g} \times 3$ = 6240 g 4 guavas = $520 \text{ g} \times 4 = 2080 \text{ g}$ Total = $6240 \text{ g} + 2080 \text{ g} = 8320 \text{ g} = 8.32 \text{ kg}$

30.	a) no, she is not correct b) the faces shown will make a square based pyramid which has 5 faces, 5 vertices and 8 edges. She should have drawn the following: 												
31.	Book = $\frac{1}{4}$ Lunch = $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$ Book + lunch = $\frac{1}{4} + \frac{3}{8} = \frac{5}{8}$ Rem = $\frac{3}{8}$ Stationary = $\frac{1}{3} \times \frac{3}{8} = \frac{1}{8}$ Saved = $\frac{3}{8} - \frac{1}{8}$ $= \frac{2}{8} = \frac{1}{4}$ $= \frac{1}{4} = \$240$ Total = $4 \times \$240 = \960												
32.	$\$490 - \$130 = 360 \div 3 = 120$ Beth + Ray + Avi = 490 <table><tr><td>35</td><td>95</td><td>\$120</td><td>130</td></tr><tr><td>+ 120</td><td>+120</td><td>3</td><td><u>360</u></td></tr><tr><td><u>\$155</u></td><td><u>\$215</u></td><td></td><td>120</td></tr></table> Beth = \$155 Ray = \$215 Avi = \$120	35	95	\$120	130	+ 120	+120	3	<u>360</u>	<u>\$155</u>	<u>\$215</u>		120
35	95	\$120	130										
+ 120	+120	3	<u>360</u>										
<u>\$155</u>	<u>\$215</u>		120										
33.	A has 4 faces, 4 vertices and 6 edges B has 5 faces, 8 edges, 5 vertices. (Any two)												
34.	Total height of 3 boys = $167 \text{ cm} \times 3 = 501 \text{ cm}$ Total height of 2 boys = $1.65 \text{ cm} \times 2 = 330 \text{ cm}$ Height of boy who left = $501 \text{ cm} - 330 \text{ cm}$ $= 171 \text{ cm} = 1 \text{ m } 71 \text{ cm}$												
35.	Volume of 1 cube = $(2 \text{ cm})^3$ $= 8 \text{ cm}^3$ A = $11 \times 8 \text{ cm}^3 = 88 \text{ cm}^3$ B = $8 \times 8 \text{ cm}^3 = 64 \text{ cm}^3$ Difference = $88 - 64 = 24 \text{ cm}^3$												
36.	$11 \frac{1}{2} \square = 230 \text{ cakes}$ $\frac{23}{2} \square = 230 \text{ cakes}$												

	$1 \square = 230 \div \frac{23}{2}$ $= 230 \times \frac{2}{23}$ $= 20 \text{ cakes}$ <p>Black Forest = $20 \times 7 \frac{1}{2}$</p> $= 150 \text{ cakes}$
pennacool.com Test 8 - Section 3	
37.	<p>50 poles = $50 \times 20 \text{ cm} = 1000 \text{ cm}$</p> <p>50 spaces = $50 \times 50 \text{ cm} = 2500 \text{ cm}$</p> <p>Perimeter = 3500 cm</p> <p>$L + B = 3500 \text{ cm} \div 2$</p> <p>$4\square + \square = 1750 \text{ cm}$</p> <p>$5\square = 1750 \text{ cm}$</p> <p>$\square = 350 \text{ cm}$</p> <p>$L = 350 \text{ cm} \times 4 = 1400 \text{ cm} = 14 \text{ m}$</p> <p>$B = 350 \text{ cm} = 3.5 \text{ m}$</p> <p>Area = $L \times B$</p> $= 14 \text{ m} \times 3.5 \text{ m}$ $= 49 \text{ m}^2$
38.	<p>3 boxes have = $30 \times 3 = 90 \text{ pens}$</p> <p>Selling price = $\frac{50}{100} \times \frac{240}{1}$</p> $= \$360.00$ <p>Buy 4 get 1 free = 5 in 1 set</p> <p>No of pens sold = $\frac{90}{5} \times 4$</p> $= 72 \text{ sold}$ <p>72 sold for \$360</p> <p>1 pen = $\\$360 \div 72$</p> $= \$5.00$
39.	<p>(a) $A + B = 1125 \text{ cm}^3$</p> <p>$\square + 8\square = 1125 \text{ cm}^3$</p> <p>$9\square = 1125 \text{ cm}^3$</p> <p>$\square = 1125 \text{ cm}^3 \div 9 = 125 \text{ cm}^3$</p> <p>Volume of B = $125 \text{ cm}^3 \times 8 = 1000 \text{ cm}^3$</p> <p>Side = $\sqrt[3]{1000} \text{ cm}^3 = 10 \text{ cm}$</p> <p>(b) length of wire = $10 \text{ cm} \times 12 = 120 \text{ cm}$</p>

40.

a)

b) 2 acute angles, 1 obtuse angle, 1 reflex angle

pennacool.com Test 9 - Section 1

1.	108 008
2.	$5 + 37 = 42$
3.	4.15
4.	20 128
5.	$\frac{10}{100} \times \frac{840}{1} = \84.00
6.	\$65.35
7.	0.11
8.	$\frac{1}{2} + \frac{3}{4} = \frac{5}{4} \div 2$ $= \frac{5}{4} \times \frac{1}{2} = \frac{5}{8}$
9.	4 oranges = 440 g – 80 g = 360 g 1 orange = 360 ÷ 6 = 90 grams
10.	8 sp = 3.6cm – 0.4 = 3.2 cm 1 sp = 3.2 cm ÷ 8 = 0.4 cm P = 2.4 cm
11.	$\frac{45}{100} \times \frac{160}{1} = 72$
12.	Haley = \$467 Sister = \$467 + \$59 = \$526 Total = \$467 + \$526 = \$993.00
13.	The arrow made three quarter-turns in an anti-clockwise direction.
14.	$\begin{array}{r} 9:45 \\ - 7:25 \\ \hline 2:20 \end{array}$
15.	D

16.

Base = 12 ÷ 2 cm = 6 sq
Height = 8 ÷ 2 cm = 4 sq

17.
$$\begin{array}{r} \boxed{8} \quad \boxed{6} \quad \boxed{3} \\ + \boxed{7} \quad \boxed{4} \quad \boxed{2} \\ \hline 16 \quad 0 \quad 5 \end{array}$$

18. Sum = 38 × 6 = 228

19. 128 cm

20. Mean = (40 + 35 + 25 + 60) ÷ 4
= 160 ÷ 4
= 40 fruits

pennacool.com Test 9 - Section 2

21. 72

22. Cost Price = \$28

Selling Price = $\frac{36}{4} \times \$4.25 = \38.25

Profit = \$38.25

$$\begin{array}{r} \$28.00 - \\ \hline \$10.25 \end{array}$$

23. Kerry = \$6, Val = \$9
Total = \$15

Kerry = $\frac{\$120}{\$15} \times 6 = \$48$

Val = $\frac{\$120}{\$15} \times 9 = \$72$

24.
$$\begin{array}{r} \text{Hrs} \quad \text{Mins} \\ 10 \quad 45 \\ 30 \quad \longrightarrow \quad 10 \quad 00 \\ 1 \quad 25 \quad \longrightarrow \quad 1 \quad 00 \\ 28 + \quad \longrightarrow \quad 2 \quad 08 + \\ \hline 128 = 2 \text{ hours } 8 \text{ mins} \\ = 1:08 \text{ pm} \end{array}$$

25. Area of A = 16cm × 24cm = 384cm²
Area of B = 28cm × 13cm = 364cm²
Total area = 384 + 364 = 748cm²

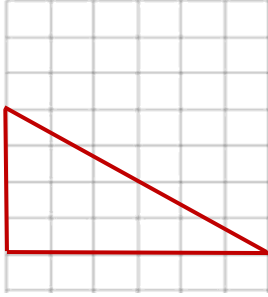
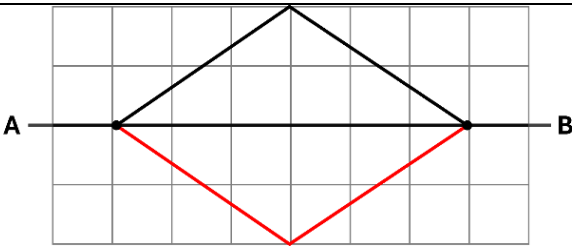
26. 1 set = 6 sticks
No of sets = $\frac{52}{6} = 8 \text{ r } 4$
4th pole = green

27. 1 shirt = 5 ties

	$23T = \$552$ $1T = \$552 \div 23$ $= \$24$ shirt = $\$24 \times 5$ $= \$120$				
28.	No of tiles = $\frac{800cm \times 600cm}{40cm \times 40cm}$ $= 300 \text{ tiles}$ Length of time to lay tiles = $\frac{300}{10} \times 8 = 240 \text{ mins}$ = 4 hrs He will finish at = $11:40 + 4:00$ $= 15:40 \text{ hrs}$ $= 3:40 \text{ pm}$				
29.	$L + B = 130cm \div 2 = 65cm$ $4 \square + \square = 5 \square = 65cm$ $\square = 65cm \div 5$ $\square = 13cm$ Length = $13 \times 4 = 52cm$ Breadth = $13cm$ Area of rectangle = $L \times B$ $= 52cm \times 13cm$ $= 676cm^2$				
30.	<table border="0"> <tr> <td>Donut + Soda = \$129</td> <td></td> </tr> <tr> <td> $\begin{array}{r} \\$9 \quad \\$9 \quad 30 - \\ + \\$6 \quad 11 \square \quad \\$99 \\ \hline \\$15 \quad \\$9 \quad \\$9 \end{array}$ </td> <td> $\begin{array}{r} 5D = \\$6 \times 5 = \\$30 \\ \\$129 - \\$30 = \\$99 \\ \\$99 \div 11 \text{ items} = \\$9 \end{array}$ </td> </tr> </table> 4 donuts = $\$15 \times 4 = \60 5 sodas = $\$9 \times 5 = \45 Cost = $\$60 + \$45 = \$105$	Donut + Soda = \$129		$\begin{array}{r} \$9 \quad \$9 \quad 30 - \\ + \$6 \quad 11 \square \quad \$99 \\ \hline \$15 \quad \$9 \quad \$9 \end{array}$	$\begin{array}{r} 5D = \$6 \times 5 = \$30 \\ \$129 - \$30 = \$99 \\ \$99 \div 11 \text{ items} = \$9 \end{array}$
Donut + Soda = \$129					
$\begin{array}{r} \$9 \quad \$9 \quad 30 - \\ + \$6 \quad 11 \square \quad \$99 \\ \hline \$15 \quad \$9 \quad \$9 \end{array}$	$\begin{array}{r} 5D = \$6 \times 5 = \$30 \\ \$129 - \$30 = \$99 \\ \$99 \div 11 \text{ items} = \$9 \end{array}$				
31.	3 days = $\$240 \times 3 = \720.00				
32.	$4L = 12cm \times 4 = 48 \text{ cm}$ $4B = 6cm \times 4 = 24 \text{ cm}$ $4H = 9cm \times 4 = 36 \text{ cm} +$ $\quad \quad \quad 108 \text{ cm}$ <hr/> No, he will not have enough wire. He needs 1.08m but only has 1m.				
33.	Total # of cubes needed to completely fill the cuboid = $4 \times 3 \times 3 = 36$ cubes # of cubes in cuboid = 14 No needed = $36 - 14 = 22$ cubes				
34.	No. of lines of symmetry = 8 No. of pairs of parallel lines = 4				
35.	Liz needs to make one quarter-turn in an anti-clockwise direction.				
36.	$Jess = \frac{120}{400} \times \frac{100}{1} = 30\%$ $Joe = \frac{80}{400} \times \frac{100}{1} = 20\%$ $Ryan = \frac{140}{400} \times \frac{100}{1} = 35\%$ $Beth = \frac{60}{400} \times \frac{100}{1} = 15\%$ Ryan collected 15% more than Joe				
pennacool.com Test 9 - Section 3					
37.	$1^{st} \text{ son} = \frac{1}{4}$ $2^{nd} \text{ son} = \frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$ $1^{st} \text{ son} + 2^{nd} \text{ son} = \frac{1}{4} + \frac{3}{8} = \frac{5}{8}$ $3^{rd} \text{ son} + 4^{th} \text{ son} = \frac{3}{8}$ Let $4^{th} \text{ son} = \square$, therefore, $3^{rd} \text{ son} = 3\square$ $2\square + \square = \frac{3}{8}$ $3\square = \frac{3}{8}$ $\square = \frac{3}{8} \div 3 = \frac{3}{8} \times \frac{1}{3}$ $\square = \frac{1}{8} = 4^{th} \text{ son}$ $3^{rd} \text{ son} = \frac{1}{8} \times \frac{2}{1} = \frac{1}{4}$ $\frac{1}{4} = \$360$ Total money shared = $\frac{4}{1} \times \frac{360}{1} = \1440				
38.	(a) Missing numbers: 96 and 85 Sum = Mean \times Qty = $76 \times 5 = 380$ runs $4^{th} + 5^{th} = 380 - (78 + 63 + 58)$ $= 380 - 199 = 181$ (b) New mean = $76 - 5 = 71$ Sum of runs = $71 \times 7 = 497$ $6^{th} \text{ match} + 7^{th} \text{ match} = 497 - 380$ $= 117 \text{ runs}$ $7^{th} \text{ match} = (117 - 15 \text{ runs}) \div 2$ $= 102 \text{ runs} \div 2$ $= \mathbf{51 \text{ runs}}$ $6^{th} \text{ match} = 51 + 15$ $= \mathbf{66 \text{ runs}}$				

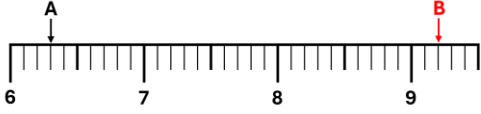
39.	4 glasses = 2.4 L = 2400 ml 1 glass = 2400 ml ÷ 4 = 600 ml 10 glasses = 600 ml × 10 glasses = 6000 ml 1 pk of milk = 6000 ml ÷ 4 packs = 1500 ml																					
40.	a)	Fig	1	2	3	4	5	6	7	8												
		No.	1	3	6	10	15	21	28	36												
		8 th figure = 36 squares																				
	b)	Fig	9	10	11	12	13															
		No.	45	55	66	78	91															
		The 12 th and 13 th figures: 78 + 91 = 169																				
pennacool.com Test 10 - Section 1																						
1.	9																					
2.	908																					
3.	400																					
4.	\$10 ÷ \$0.40 = 25 each																					
5.	<table><tr><td>$\frac{3}{5}$</td><td>$\frac{1}{2}$</td><td>$\frac{7}{10}$</td><td>$\frac{11}{20}$</td></tr><tr><td> </td><td> </td><td> </td><td></td></tr><tr><td>$\frac{12}{20}$</td><td>$\frac{10}{20}$</td><td>$\frac{14}{20}$</td><td></td></tr></table>										$\frac{3}{5}$	$\frac{1}{2}$	$\frac{7}{10}$	$\frac{11}{20}$					$\frac{12}{20}$	$\frac{10}{20}$	$\frac{14}{20}$	
$\frac{3}{5}$	$\frac{1}{2}$	$\frac{7}{10}$	$\frac{11}{20}$																			
$\frac{12}{20}$	$\frac{10}{20}$	$\frac{14}{20}$																				
6.	<table><tr><td>Hrs</td><td>Mins</td></tr><tr><td>6</td><td>10</td></tr><tr><td>4</td><td>30 -</td></tr><tr><td>1 hr</td><td>40 mins = 1 $\frac{2}{3}$ hrs</td></tr></table>										Hrs	Mins	6	10	4	30 -	1 hr	40 mins = 1 $\frac{2}{3}$ hrs				
Hrs	Mins																					
6	10																					
4	30 -																					
1 hr	40 mins = 1 $\frac{2}{3}$ hrs																					
7.	No of soursops = $\frac{6400g}{800g} = 8$ No to be added = 8 – 3 = 5																					
8.	3.7 × 100 = 370 cm																					
9.	5 × 3 × 3 = 45 cubes																					
10.	Salary increase = $\frac{25}{100} \times \frac{3800}{1} = \950 New salary = \$3800 + \$950 = \$4750																					
11.	125																					
12.	Rectangle and rhombus																					
13.	39 + □ = 36 × 2 = 72 □ = 72 – 39 □ = 33 yrs																					
14.	Trapezium																					
15.	Total to be shaded = 117 cm ² ÷ 9 = 13 No. shaded = 8 squares No. still to be shaded = 13 – 8 = 5 squares																					
16.	E and C																					

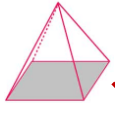

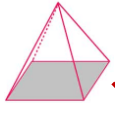

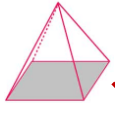

17.	42															
18.	Triangular based pyramid															
19.	<table><tr><th>Pets</th><th>Tally</th><th>Frequency</th></tr><tr><td>Dog</td><td> </td><td>8</td></tr><tr><td>Cat</td><td> </td><td>13</td></tr><tr><td>Bird</td><td> </td><td>3</td></tr><tr><td>Fish</td><td> </td><td>7</td></tr></table>	Pets	Tally	Frequency	Dog		8	Cat		13	Bird		3	Fish		7
Pets	Tally	Frequency														
Dog		8														
Cat		13														
Bird		3														
Fish		7														
20.	18 + 5 = 23 students															
pennacool.com Test 10 - Section 2																
21.	Prime nos = 2 + 17 + 23 + 43 = 85 Composite = 8 + 36 + 12 + 28 = 84 Difference = 85 – 84 = 1															
22.	$17.6 \times 0.8 = 14.018 \approx 14.1$															
23.	$\frac{2}{3} \times \frac{24}{1} = \16 $= \frac{5}{2} \times \$16$ $= \$40.00$															
24.	1 yr 8 mths = $1\frac{2}{3}$ yrs $SI = \frac{P \times R \times T}{100} = \frac{12\ 600 \times 8 \times 5}{100 \times 3}$ SI = \$1 680.00															
25.	$\frac{3}{7} = 12$ goals Total goals = $12 \times \frac{7}{3} = 28$ goals Team 6 = 28 – (2 + 6 + 5 + 8 + 4) = 28 – 25 = 3 goals															
26.	Amt. soda used = 12 000 ml – 600 ml = 11400 ml Amt. 1 person drank = 300 ml No. of people = 11 400 ml ÷ 300 = 38 people															
27.	Perimeter = (L + B) × 2 = (48 m + 32 m) × 2 = 160 m Minus gate space = 160 m – 8 m = 152 m No. of poles needed = $\left(\frac{152m}{4m}\right) + 1$ = 38 + 1 = 39 poles															
28.	$\frac{6375ml}{125ml} = 51$															

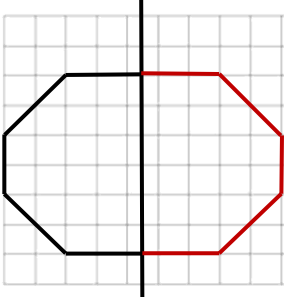
29.	 <p>a) b) scalene</p>
30.	$\text{Game} = \frac{1}{3} \quad \text{Book} = \frac{2}{9}$ $\text{Game} + \text{Book} = \frac{5}{9}$ $\text{Rem} = \frac{4}{9}$ $\text{Lunch} = \frac{1}{2} \times \frac{4}{9} = \frac{2}{9}$ $\frac{1}{3} - \frac{2}{9} = \60 $\frac{1}{9} = \$60$ $\text{Total} = 9 \times \$60 = \$540.00$
31.	 <p>a. b. Rhombus c. 2 pairs of equal sides / 2 lines of symmetry</p>
32.	D is different. A, B and C are equal to $\frac{1}{2}$ whereas D is $\frac{2}{6}$ which is equivalent to $\frac{1}{3}$.
33.	$3 \text{ adults} = \$180 \times 3 = \540 $2 \text{ children} = \$90 \times 2 = \180 $\text{Total} = \$540 + \$180 = \$720$ $\text{VAT} = \frac{1}{8} \times \frac{720}{1} = \90 $\text{Price paid} = \$720 + \$90 = \$810$
34.	A
35.	$\frac{486}{2} = 243$ $243 - 1 = 242$ $243 + 1 = 244$ <p>The two consecutive even numbers are = 242 and 244</p>
36.	Wednesday

pennacool.com Test 10 - Section 3																																												
37.	L of backyard = Pool length + deck length + 2 m = 36 m + (36 ÷ 3) + 2 m = 36 m + 12 m + 2 m = 50 m W of backyard = 18 m + 2 m + 2 m = 22 m Amt. of wire needed = (50 + 22) × 2 = 72 × 2 = 144 m																																											
38.	Vol. of A = 12 cm × 12 cm × 12 cm = 1728 cm ³ = Vol of B Therefore, Height of B = $\frac{V}{L \times B} = \frac{1728 \text{ cm}^3}{24 \times 12} = 6 \text{ cm}$																																											
39.	a)	<table><tr><th>Pattern #</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr><tr><td>No. of △</td><td>4</td><td>8</td><td>12</td><td>16</td><td>20</td><td>24</td><td>28</td><td>32</td><td>36</td><td>40</td></tr><tr><td>No. of ○</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr></table>	Pattern #	1	2	3	4	5	6	7	8	9	10	No. of △	4	8	12	16	20	24	28	32	36	40	No. of ○	1	2	3	4	5	6	7	8	9	10	b) 15 × 4 = 60 c) 84 ÷ 4 = 21 st pattern								
Pattern #	1	2	3	4	5	6	7	8	9	10																																		
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No. of ○	1	2	3	4	5	6	7	8	9	10																																		
40.	a)	Mean = (70 + 90 + 100 + 110 + 80) ÷ 5 = 90 items																																										
	b)	<table><tr><th>Items</th><th>Price</th><th>Qty Sold</th><th>Money Earned</th></tr><tr><td>Cheese pie</td><td>\$3.00</td><td>70</td><td>70 × \$3 = \$210</td></tr><tr><td>Chicken burger</td><td>\$12.00</td><td>90</td><td>90 × \$12 = \$1080</td></tr><tr><td>Potato pie</td><td>\$7.50</td><td>100</td><td>100 × \$7.50 = \$750</td></tr><tr><td>Grilled chicken</td><td>\$15.00</td><td>110</td><td>110 × \$15 = \$1650</td></tr><tr><td>Puffs</td><td>2 for \$10</td><td>80</td><td>$\frac{80}{2} \times 10 = \\400</td></tr><tr><td colspan="3">Total</td><td>\$4 090</td></tr></table>									Items	Price	Qty Sold	Money Earned	Cheese pie	\$3.00	70	70 × \$3 = \$210	Chicken burger	\$12.00	90	90 × \$12 = \$1080	Potato pie	\$7.50	100	100 × \$7.50 = \$750	Grilled chicken	\$15.00	110	110 × \$15 = \$1650	Puffs	2 for \$10	80	$\frac{80}{2} \times 10 = \400	Total			\$4 090						
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pennacool.com Mock Test - Section 1	
1.	Two hundred and eight thousand and forty-nine
2.	70 000
3.	10
4.	>
5.	$7\frac{1}{5}$
6.	49.92
7.	$\square^2 + 12 = 93$ $\square^2 = 93 - 12 = 81$ $\square = \sqrt{81} = 9$
8.	$\frac{3}{20}$
9.	$\frac{2}{5}, 55\%, 0.65$

10.	$3750 \text{ ml} \div 250 \text{ ml} = 15 \text{ glasses}$
11.	64, 52, 42, 34, 28 , 24 –the difference between consecutive terms decreases by 2 each time.
12.	$6.3 + 2.9 = 9.2$ 
13.	$1 \text{ sq} = 1 \text{ cm}^2$ $14 \text{ sq} = 14 \times 1 \text{ cm}^2 = 14 \text{ cm}^2$
14.	$(8 \text{ cm} \times 3) + (6 \text{ cm} \times 3) = 24 \text{ cm} + 18 \text{ cm} = 42 \text{ cm}$
15.	160 cm
16.	Total # cubes needed = $5 \times 2 \times 4 = 40 \text{ cubes}$ $\frac{3}{4}$ filled = $\frac{3}{4} \times 40 = 30 \text{ cubes}$
17.	b) Less than 90°
18.	Mean of = $(12 + 18 + 24) \div 3 = 18$ $20 + \square = 18 \times 2$ $20 + \square = 36$ $\square = 36 - 20$ $\square = 16$
19.	Suri made a $\frac{1}{4}$ turn in an anticlockwise direction
20.	$60 + 85 + 70 + 80 + 65 = 360$ $\frac{360}{500} \times \frac{100}{1} = 72\%$
pennacool.com Mock Test - Section 2	
21.	No. of people = $3\frac{1}{2} \div \frac{1}{8} = \frac{7}{2} \times \frac{8}{1} = 28 \text{ people}$
22.	2 tee shirts = $\$140 \times 2 = \280 Discount = $\frac{20}{100} \times \frac{280}{1} = \56.00 Price paid = $\$280 - \$56 = \$224$
23.	Add whole numbers: $4 + 3 = 7$ Add Fractions: $\frac{2}{5} = \frac{4}{10}$ Therefore: $\frac{4}{10} + \frac{7}{10} = \frac{11}{10} = 1\frac{1}{10}$ $1 + 7 = 8$ Answer = $8\frac{1}{10}$
24.	No. of students = $\left(\frac{950 \text{ cm}}{50 \text{ cm}}\right) + 1 = 19 + 1$ = 20 students
25.	Cost Price of 3 doz. = $\$144 \times 3 = \432 Profit = $\frac{50}{100} \times \$432 = \216 Selling Price = $\$432 + \$216 = \$648$ Selling Price of 1 ball = $\$648 \div 36 = \18.00

26.	Rai = \$376 Noah = $\frac{25}{100} \times \frac{376}{1} = \94 = $\$376 - \$96 = \$282$ Sariah = $\$282 - \$49 = \$233$ Total = $\$376 + \$282 + \$233 = \891.00						
27.	3 roses + 3 lilies = $\$348 - \$186 = \$162$ 1 rose + 1 lily = $\$162 \div 3 = \54 Cost of a lily = $(\$54 - \$6) \div 2 = \$48 \div 2 = \24 1 rose = $\$6 + \$24 = \$30$						
28.	Stall A = $\frac{24}{3} \times \frac{25}{1} = \200 Stall B = $\frac{24}{4} \times \frac{29}{1} = \174 Stall B offered a deal. The cost of the 24 mangoes is \$174 whereas in stall A it is \$200. It is \$26 cheaper in Stall B.						
29.	No. of hrs worked in a day = 16:00 $\frac{8:30 - 7:30}{1} = 1 \text{ hour}$ Total hours in a day = $7\frac{1}{2} \text{ hours}$ Daily wage = $\$32 \times 7\frac{1}{2} = \240 Weekly salary = $\$240 \times 5 \text{ days} = \$1\,200.00$						
30.	2 pcs = $1\frac{3}{4} \text{ m} \times 2 = \frac{7}{4} \times \frac{2}{1} = 3\frac{1}{2} \text{ m} = 3\text{m } 50 \text{ cm}$ Length left = 8 m 40 cm $\frac{3 \text{ m } 50 \text{ cm} - 8 \text{ m } 40 \text{ cm}}{4 \text{ m } 90 \text{ cm or } 4.9 \text{ m}}$						
31.	<table border="1"> <thead> <tr> <th>A</th><th>B</th></tr> </thead> <tbody> <tr> <td></td><td>4 faces 6 edges</td></tr> <tr> <td></td><td>5 faces 8 edges</td></tr> </tbody> </table>	A	B		4 faces 6 edges		5 faces 8 edges
A	B						
	4 faces 6 edges						
	5 faces 8 edges						
32.	1 can = $275 \text{ ml} \times 8 = 2200 \text{ ml}$ 4 cans = $2200 \text{ ml} \times 4 = 8800 \text{ ml}$ 5 glasses = $275 \text{ ml} \times 5 = 1375 \text{ ml}$ Total = $10\,175 \text{ ml} = 10.175 \text{ litres}$						
33.	No. needed to fill cuboid = $6 \times 6 \times 5 = 180 \text{ cubes}$ No. in cuboid = 20 No. needed = $180 - 20 = 160 \text{ cubes}$						

34.	a) b)		octagon
35.	a° = more than 90° b° = less than 90°		
36.	Mazda + Nissan = 12□ = 900 cars □ = 900 ÷ 12 = 75 cars Diff in Toyotas and Suzukis = 6□ – 3□ = 3□ 3□ = 3 × 75 cars = 225 cars		
pennacool.com Mock Test - Section 3			
37.	Fertilizer = $\frac{1}{8}$ Seedlings = $\frac{1}{2} \times \frac{7}{8} = \frac{7}{16}$ Rem = $1 - \left(\frac{1}{8} + \frac{7}{16}\right)$ = $1 - \frac{9}{16}$ = $\frac{16}{16} - \frac{9}{16} = \frac{7}{16}$ Hose = $\frac{3}{7} \times \frac{7}{16} = \frac{3}{16}$ Rem = $\frac{7}{16} - \frac{3}{16} = \frac{4}{16} = \frac{1}{4}$ Total = \$480 × 4 = \$1920 Hose = $\frac{3}{16} \times \frac{1920}{1} = \360.00		

38.	$SI = \frac{P \times R \times T}{100} = \frac{6000 \times 5 \times 5}{100 \times 4} = \375 Total to be repaid = \$6000 + \$375 = \$6375 $1\frac{1}{4}$ years = 15 months Amt. to be paid per month = \$6375 ÷ 15 = \$425 Yes, she will be able to repay the loan since she only has to pay \$425 per month.																							
39.	Small square + large square = 160 cm ² $\square + 9\square = 160\text{ cm}^2$ $10\square = 160\text{ cm}^2$ $\square = \frac{160}{10} = 16\text{ cm}^2$ Large square = 16 cm ² × 9 = 144 cm ² Perimeter of small sq = $\sqrt{16\text{cm}^2} \times 4 = 16\text{ cm}$ Perimeter of large sq = $\sqrt{144\text{cm}^2} \times 4 = 48\text{ cm}$ Difference = 48 cm – 16 cm = 32 cm																							
40.	<table border="1"><thead><tr><th>Match</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th></tr></thead><tbody><tr><th>Runs</th><td>90</td><td>106</td><td>86</td><td>92</td><td>50</td><td>100</td><td>141</td></tr></tbody></table> $90 + 106 + 86 + 92 + 5^{\text{th}} + 6^{\text{th}} + 7^{\text{th}} = 95 \times 7$ $374 + 5^{\text{th}} + 6^{\text{th}} + 7^{\text{th}} = 665\text{ runs}$ $5^{\text{th}} + 6^{\text{th}} + 7^{\text{th}} = 665 - 374\text{ runs} = 291\text{ runs}$ Let: $5^{\text{th}}\text{ match} = \square$ $6^{\text{th}}\text{ match} = 2\square$ $7^{\text{th}}\text{ match} = 2\square + 41$ $\square + 2\square + 2\square + 41 = 291$ $5\square + 41 = 291$ $5\square = 291 - 41$ $= 250$ $\square = 250 \div 5 = 50$ $5^{\text{th}} = 50\text{ runs}$ $6^{\text{th}} = 50 \times 2 = 100\text{ runs}$ $7^{\text{th}} = 100 + 41 = 141\text{ runs}$								Match	1	2	3	4	5	6	7	Runs	90	106	86	92	50	100	141
Match	1	2	3	4	5	6	7																	
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ENGLISH LANGUAGE ARTS ANSWER SHEET

Pennacool.com Test 1

- | | | |
|-----------------|-----------------|---------------------|
| 1. headphones | 7. horizon, | 13. among - between |
| 2. personal | 8. disaster! | 14. drew - drew |
| 3. individuals | 9. "What | 15. being - been |
| 4. disturbing | 10. situation? | 16. were - was |
| 5. cancellation | 11. father's | 17. but - and |
| 6. gadget | 12. Association | 18. their - his/her |
-
19. The passage states that bees are in big trouble because there is a severe decline with habitat loss, pollution and climate change which are threatening the bees' population.
 20. 1. The homes of the bees are being destroyed either for usage of the trees or paved for roads.
2. The increased use of pesticides and herbicides being sprayed on plants is causing a reduction of their food supply or poisoning them.
 21. The decline in the species will affect our ecosystem because bees play a crucial role in pollination of our trees and flowers which provides fruits and vegetables thereby supporting other insects. These insects in turn support birds, bats, mammals and all other parts of the food chain with both food and shelter.
 22. Climate change which is currently causing extremes in weather conditions is causing disruptions to the bee nesting behaviour because the normal seasonal timings are being altered. This causes flowers to bloom later or earlier than expected thereby affecting the bees' food supply.
 23. You don't need to be green-fingered, just scatter the seeds and watch them grow! means that you don't have to be a skilled gardener to plant flowers. You just have to scatter seeds over the soil and they will grow.
 24. The fifth paragraph provides information on the ways by which the habitat of the bees is being destroyed thereby resulting in a decline in their population whereas the last paragraph suggests ways by which humans can affect change in their actions to increase the bee population.
 25. 1. Make a bee hotel. 2. Plant lots of flowering trees to provide the bees with nectar.
 26. Line 14: The figure of speech used in the line is simile. Line 17: The figure of speech used in the line is metaphor.
 27. The witch was old, wicked, cross and had a wrinkled face
 28. Cavernous (line 3) – large and open. Scurry (line 8) – move hurriedly/quickly
 29. Two adjectives that could be used to describe Isabel are determined, smart and inventive. (any two)
 30. Isabel is described as self-reliant because she was able to overcome all the hurdles she encountered by herself. She did not depend on others for help
 31. The important lesson learnt from this poem is that everyone, regardless of circumstances, can overcome any challenge he/she encounters by relying on their own ability and skills.
 32. Title: Isabel's Adventures/ Bravery (teacher's discretion)
Reason: I think Isabel's Adventures is a suitable title for the story because the poem outlines all the actions Isabel took to overcome all obstacles in order to protect herself.
 33. (a) The poster is inviting interested persons to join a book club. (b) Children between the ages of 9 and 11 years who are interested in reading are invited to join the book club.
 34. 1. To capture the reader's attention.
2. To focus or emphasise on important information.
 35. Two pieces of information that should be included in the poster are the date/time/location. (any two)
 36. I think it is necessary for those interested to obtain parental consent because parents need to determine if the club is safe and suitable for their children and if the activities fit into their family schedule.

Pennacool.com Test 2

- | | | |
|---|---|---|
| 1. co-operation
2. fostering
3. involves
4. trust
5. society
6. achievable | 7. meeting,
8. it!
9. needed."
10. What's
11. Mr.
12. Elementary | 13. me - I
14. laid - lay
15. his - their
16. whom - who
17. but - because
18. hesitant - hesitantly |
|---|---|---|
19. The fairy was learning to be a fairy godmother.
 20. The other fairies believed that the most important thing about a fairy was her beauty. She had thought about using her powerful magic to make herself beautiful.
 21. I think her mother wanted her to learn self-acceptance because her mother wanted her to learn that her outer appearance was not more important than her good qualities.
 22. Mission - assignment, task. Invaded- entered forcefully.
 23. 1. Just before being attacked, she put a spell on her own clothes and, managed to pass for a witch because she was ugly. That way she was able to follow the witches back to their den to learn their location. 2. She tricked the witches into believing she was indeed a witch by using her magic to prepare a big party for the witches, decorating the cave with bats, toads and spiders.
 24. At the beginning of the story, the fairy may have felt hurt and humiliated by the actions of the other fairies but at the end, she would have felt very proud of herself and appreciated for her good deeds and not judged by her physical appearance.
 25. Simile: Screeching like owls. Personification: Trees that danced merrily.
 26. The poet's problem was that she had put on a lot of weight and she had no clothes that could fit her.
 27. 1. Get rid of all unhealthy foods. 2. Go on a diet.
 28. lumber – walk slowly. vanished – disappeared
 29. The poet plans to be on a diet until she has lost all the additional weight that she has lost.
A line to support my response is: **'Til all the additional ounces have vanished.**
 30. I think the poet must have felt shocked by the increase in her weight because she had gained a lot and she had difficulty when walking.
 31. I think the poet had attended a lot of parties and other festivities during the Christmas season and had overeaten because she was unable to refuse anything offered to her.
 32. Teacher's Discretion.
 33. (a) Matura Wildlife Centre is responsible for the advertisement. (b) A turtle watching expedition is being advertised.
 34. i. Bold/large font. ii. The picture of the turtle.
 35. Turtle watching is a seasonal experience because it only occurs during a specific period of the year, that is, when the turtles come to the shore to lay their eggs. This activity cannot be viewed all year long
 36. 1. The tour guide can provide valuable information on the turtles. 2. The tour guide will ensure the safety and well-being of all members of the group on the expedition.

Pennacool.com Test 3

- | | | |
|---|--|--|
| 1. desperately
2. frantic
3. community
4. endeavour
5. advised
6. invaluable | 7. "Get lost
8. Jasmine,
9. Lee
10. man's
11. son-in-law
12. well," | 13. was - were
14. to - with
15. their -his
16. persistent - persistence
17. they - them
18. strongest - stronger |
|---|--|--|

19. AI (Artificial Intelligence) acts like a brain for computers. It is when machines are designed to be smart and do tasks that usually need human intelligence. It's a way for computers to learn and make decisions on their own, without being specifically programmed to do so
20. Machine learning is used for tasks such as image recognition or language translation whereas deep learning is used for more complex tasks, such as understanding natural language and recognising objects in videos.
21. Artificial intelligence can have a negative impact on society because it makes decisions based on the data it is trained on, therefore if someone trains the computer with negative data, it may not make the right decisions and encourage biases and harmful behaviours.
22. Biases – prejudices. Prediction – guesses about what will happen in the future.
23. The author's purpose for including the third paragraph in the passage is to explain how artificial intelligence works thereby helping the reader to better understand it.
24. **Advantage:** It can help with homework and schoolwork by explaining difficult concepts to children/ programmes such as Siri and Alexa can answer questions children have. **Disadvantage:** Children can become lazy by depending on artificial intelligence to solve problems for them and not develop their critical thinking skills.
25. **Reason 1:** To encourage the reader to reflect on the topic discussed and think about the future of artificial intelligence. **Reason 2:** To create a sense of curiosity in order to make the reader eager to find out more about the topic.
26. No, I do not think the boy enjoys going to school.
27. 1. Love to rise in a summer morn. 2. The skylark sings to me.
28. **Metaphor:** O father and mother if buds are nipped/ And blooms are blown away. **Personification:** The skylark sings to me.
29. In the first stanza the boy is happy because he loves summer mornings and the sound of the birds singing, however, his mood changes to sadness because he is to spend his day in school in the confines of his classroom.
30. The boy compares himself to a caged bird. The comparison is made because like a cage bird that cannot sing because its freedom is taken away, so too, a child cannot flourish under the constant anxiety from being kept in class.
31. The lines explain that the boy is totally uninspired by his life at school because the teacher's anger-filled eyes keep a watchful look on their actions.
32. The boy advises parents to give their children the opportunity and freedom to grow by allowing them to play and enjoy life. Parents should not place restrictions their children.
33. (a) Kids Zone Library is responsible for the advertisement. (b) The purpose of the advertisement is to encourage students to visit the library.
34. She can use Gsuite to access the digital library. In this way she can use the e-books or digital books to complete her research.
35. A red pass is a pass given by the teacher to the student to give him/her the opportunity to visit the library during class time. **Reason:** A student may be given a red pass by the teacher as a form of reward for good behaviour or completing assignments in a timely manner.
36. **Academic:** Reading develops vocabulary and comprehension skills. **Non-Academic:** It is a relaxing activity which relieves stress. (teacher's discretion)

Pennacool.com Test 4

- | | | |
|------------------|---------------|-----------------------------|
| 1. Precipitation | 7. friend's | 13. were - was |
| 2. evaporation | 8. cake. | 14. and - but |
| 3. misconception | 9. delicious, | 15. nobody - anybody |
| 4. kidney | 10. cake: | 16. who - whom |
| 5. parachute | 11. Tooth | 17. forgotten - forgot |
| 6. resistance | 12. you? | 18. preferring - preference |

19. The author's father was stressed because the shop where he worked was understaffed which meant that he had to work a lot harder.
20. **Quality:** Understanding. **Explanation:** The father, just by looking at his daughter, realised that she was stressed and took steps to help her.
21. At the beginning she is stressed because she had found out she didn't qualify for the swim team and would have to wait a whole year to try out again, however, at the end, she was relaxed after spending time with her father and sharing her thoughts with him.
22. **initiated** – introduced / **deflated** – release the air from inside the dough
23. I think the author shared a strong bond with her father since he knew exactly what was wrong with his daughter just by looking at her.
24. The author is worried that her father will get very angry and lose his temper in an explosive manner.
25. I think she had learnt patience from her bread making experience with her father and also how to relax.
26. The emotion conveyed is hopelessness/frustration/desperation.
27. The line that shows that the teacher became the student's support is: Each time I wanted to cry, you stayed there right by my side.
28. The student was sad and had no one to share his sorrow, however, when he met his teacher, he shared his troubles with her, and she listened to him and supported him.
29. In the third stanza the boy worried that when he leaves the teacher's class that their relationship would change but in the last stanza, he is happy because he has realized that his teacher would always remain his friend.
30. The teacher helped the student to overcome his sadness by supporting and consoling him when he is troubled and despondent. She became the student's friend.
31. The action displayed that shows that the teacher will always be there for the students is that regardless of how busy the teacher's schedule is, he always makes time to ask the student if he is fine.
32. **Gradually disappear** – fade / **Rely on** - trust
33. The purpose of this poster is to inform students about strategies to effectively manage their time in preparation for SEA.
34. 1. To attract the reader's attention. / 2. To make the text easier to read
35. I think a timetable can be used to organize daily activities
36. She should follow tip 5. She should avoid multi-tasking and work on one assignment at a time. In this way, she would save time and reduce stress. The quality of her work will also improve.

Pennacool.com Test 5

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|---|---|--|
| <ol style="list-style-type: none"> 1. impacts 2. encompasses 3. minor 4. offences 5. contributors 6. peer | <ol style="list-style-type: none"> 7. creatures! 8. Butterflies 9. stages: 10. butterfly's 11. loss, 12. creatures? | <ol style="list-style-type: none"> 13. sustain - sustains 14. around - about 15. industry - industrial 16. heavy - heavily 17. cause - causing 18. most - more |
|---|---|--|
-
19. Emma wanted to become a violinist because she had heard someone play a violin solo at a local concert and it had inspired her.
 20. **Quality:** Dedication/Commitment. **Explanation:** Emma's invested a lot of time and effort into achieving her goal of becoming a violinist.
 21. (a) simile (b) metaphor
 22. **prestigious** – highly respected, honoured. **apprehensive** – nervous, anxious.
 23. I think the author included paragraphs 2 & 3 to show the reader that with hard work, dedication and persistence, anything is possible.

24. Emma poured her heart and soul into her performance means putting her greatest effort forward into her performance by investing all her emotions and energy.
25. I think that Emma is an inspiration/ role model for others. She had a dream and she worked tirelessly and diligently to achieve her goal despite the many challenges she faces along the way.
26. The garden is in a corner of the backyard and flowers are grown in it.
27. 1. Bees hum gentle lullabies. 2. It sings a song of nature.
28. The trees are compared to guardians. Guardians are protectors. The poet likens the trees to protectors because the trees provide shelter to all the creatures that live in the garden.
29. **(Teacher discretion) Sight:** Butterflies dance lightly. **Hearing:** It sings a song of nature
30. In the third stanza, the poet is describing a small stream with very clean water that flows through the garden creating sounds that are peaceful and gentle like that of music.
31. **Precious** - treasured/cherished. **Haven** - A safe place/ a refuge/ a sanctuary
32. The mood is one of tranquillity.
33. (a) The graphic represents a timeline. (b) It is a good way to represent information based on events because it shows the chronological order in which events take place.
34. (a) He was twenty-one years old. (b) Debuted means played for the first time.
35. 1. First player to retake a Test Batting Record. 2. Inducted into the International Council Hall of Fame
36. (a) He played international cricket for seventeen years. (b) I would place that event at the letter C.

Pennacool.com Test 6

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|----------------|-------------|---------------------------|
| 1. crucial | 7. S. | 13. were - was |
| 2. reducing | 8. street, | 14. inspire - inspiration |
| 3. struggled | 9. trees: | 15. tireless - tirelessly |
| 4. assignments | 10. him. | 16. for - on |
| 5. overwhelmed | 11. Thomas' | 17. who's - whose |
| 6. achievers | 12. be! | 18. so – because/since |
-
19. The range of technology helped children to continue their education, allowed them to interact with their friends and kept them entertained.
 20. All the rules about children's access to computers and internet were rewritten because of the pandemic means that prior to the pandemic, screen time for children was strictly limited by parents however, the students' shift to online learning during the pandemic made computers and internet a necessity.
 21. 1. For people who can't attend school physically, online learning platforms can ensure that they receive an education. 2. There are special electric wheelchairs that can transport them from one place to another. **(Teacher's discretion)**
 22. **interacting** – communicating. **significant** – important
 23. Lack of self-esteem: Using image filters to enhance their appearance when they take pictures of themselves. / They become withdrawn.: They check their news feed continuously and does not communicate with other.
 24. The author included the line to show that children's exposure to technology occurs from birth.
 25. Paragraph two outlines the advantages of using technology whereas paragraph four shows the disadvantages of technology use to children.
 26. The words that I would use to describe the poet are adventurous and imaginative.
 27. The line means that the days in the summer months are longer because the sun rises earlier and sets at a later time.
 28. In the last stanza, the poet is advising the readers to value and hold dear all positive experiences because they are precious. He advises to maintain a connection with your inner child, and it will navigate you to overcome challenges.
 29. The lines which show that the poet will never forget his childhood days are lines 21 and 22: Now echoes of those childhood days, Still whisper in our hearts.

30. **Line 13 and 14:** Metaphor / **Line 18:** Personification
31. **Companions (line 19)** – friends. **Impart (line 24)** – give, transmit
32. Yes, I think it is a suitable title. The poem is mainly about a person who is reflecting on his/her childhood reminiscing about all the things he/she enjoyed as a child.
33. The signs of poor mental health are depression, anxiety and stress.
34. Mental Health refers to a personal emotional and psychological well-being.
35. 1. Bold font. 2. Pictures/graphics.
36. 1. Sharing your feeling with someone can provide relief and support. 2. The person can offer advice about how to deal with the issue.

Pennacool.com Test 7

- | | | |
|--|---|---|
| 1. technology
2. disabilities
3. approach
4. strengthen
5. challenges
6. having | 7. Rai,
8. Bahos
9. destinations:
10. today?"
11. Let's
12. was! | 13. who - that
14. finds - found
15. pass - past
16. and - but
17. in - into
18. appreciation - appreciating |
|--|---|---|
19. The story is set in the forest.
20. I think Dara will place the greatest value on friendship because the passage states that Dara's loyalty is unparalleled which means that her loyalty is exceptional and unmatched.
21. 1. **Simile** – The wind howled like a pack of wolves. 2. **Personification** – The river sang sweet melodies.
22. **Reinforcing** – strengthening. **Emerged** – came out of
23. The value demonstrated by the four friends is co-operation/teamwork. They worked together during the storm to keep themselves safe.
24. The moral of the story is that true friends will stick together through thick and thin, facing challenges with courage and unity.
25. A suitable for the passage is The Four Unlikely Friends. The title is suitable because although the four animals possessed different characteristics, they shared a special bond that was unbreakable.
26. One thing the pig could do that other pigs are unable to do is to work sums in his head.
27. **Question 1** - What was the reason for his birth? / **Question 2** - Why was he placed upon this earth?
28. The line means that in an instant, the person gained understanding or came to the realization about something.
29. The pig's mood at the beginning of the poem was one of curiosity whereas at the end of the poem it is one of satisfaction.
30. 1. There was no book he hadn't read – Personification / 2. He jumped up like a ballet dancer - Simile
31. The pig ate the farmer because he thought that the farmer wanted to kill him to sell his meat in the meat shop.
32. Teacher's discretion.
33. (a) The Pinehill Community is responsible for the poster. (b) The purpose of the advertisement is to inform people about the fundraiser so that they can bring their vehicles to have it washed so they can raise funds for the library.
34. 1. The start and end time of the car wash. / 2. The location of the fund raiser.
35. 1. To get the early bird specials. / 2. To get give-aways.
36. 1. Different fonts. / 2. Pictures/illustrations.

Pennacool.com Test 8

- | | | |
|-----------------|------------|-----------------------------|
| 1. Inclement | 7. rain, | 13. values - value |
| 2. safety | 8. "Can | 14. their – his/her |
| 3. thunderstorm | 9. Aunt | 15. knowing - known |
| 4. hazardous | 10. while! | 16. important - importantly |
| 5. property | 11. them. | 17. reliable - reliability |
| 6. resilient | 12. early? | 18. with - by |

19. Edward was a young knight who was brave and intelligent.
20. **Shocked** - The dragon had not expected Edward to stand up to him. / **Gullible** - The dragon readily believed Edward when he told him about the Great Crystal Sword
21. (i) façade - The front/ facing / (ii) Unsheathe – remove/ pull out
22. I think Edward was able to defeat his enemies by using his wit and intelligence to outsmart them.
23. Edward tricked the dragon into thinking that he possessed a sword that could kill it. This frightened the dragon who agreed to meet Edward at the summit of a mountain which was very far away. When the dragon left, Edward emerged from his hiding spot and freed the hostages.
24. I think the dragon would have been very angry because Edward had tricked him into going inside the cage so that he could rescue the hostages and he had gotten trapped inside the cage.
25. I admire and respect Edward for his ability to defeat his enemies using his intelligence and no violence. Edward possessed the remarkable skill of making up stories and being able to convince his enemies that they were true. In this way, he defeated them without having to do battle with them. This method is indeed very creative and ingenious.
26. The poet describes society as a puzzle that is complex and grand.
27. The author thinks that friendships should be formed based on love and not using race and religious beliefs as the criteria to select a friend.
28. The line means that we should reach out to others to solve differences thereby promoting peace and unity instead of creating division and enmity in society.
This question is asked by the poet because he wants people to live in harmony and not continuously fighting with each other.
29. The poet uses questions so that the reader would think about them and consider his own view of the questions asked.
30. **Compassion (line 15)** – care/ concern. / **Seeking (line 19)** – finding
31. I think the poet wants a world where people show care and concern for each other, a world where people are more understanding and kind and work with each other to solve problems and not engage in fighting.
32. **Title:** Making the World a Better Place / **Reason:** The poet's questions all lead to us doing some reflection of our actions and to thinking about possible ways to make the world a kinder and more caring place. (**Teacher's discretion**)
33. (a) The purpose of the advertisement is to inform people about the Entrepreneurship Fair so that they can visit and support the young entrepreneurs at the school. (b) The event is being held on Friday 7th May, 2025 from 9:00 am to 2:00 pm
34. Yes, I think it is appropriate. The light bulb is a symbol of innovation and creativity which are important characteristics of an entrepreneur.
35. 1. It will help the entrepreneurs make improvements to their products. / 2. Feedback can boost their confidence
36. 1. Call 600-0000 /
2. Visit the website at www.orchardgarden.pri.school.

Pennacool.com Test 9

- | | | |
|-----------------|-------------------|-------------------------|
| 1. magnificence | 7. Agency | 13. were - was |
| 2. splendour | 8. vacation: | 14. tip - tips |
| 3. boasts | 9. three-quarters | 15. but - although |
| 4. rhythms | 10. attractions, | 16. seriously - serious |
| 5. exuberant | 11. parents' | 17. and – to |
| 6. awe | 12. have! | 18. worse - worst |

19. One-third of the earth is covered by forest.
20. The forest remove carbon from the environment thereby reducing the concentration of greenhouse gases in the atmosphere thus preventing extreme global temperature rises.
21. i. **Multitude** (line 7) – a large number, many / ii. **Profound** (line 13)– significant.
22. I think humans are largely responsible for the destruction of forests because humans cut down trees and clear forests to set up factories and buildings to accommodate people. They also clear land to build roads.
23. Reforestation is the planting of trees in a forest where certain trees are showing a decline whereas afforestation concentrates on converting deserts or unused lands into a whole new forest.
24. 1. Participate in tree planting activities. / 2. Reduce waste, reuse items and recycle.
25. The tone of the passage is one of concern for the planet. The author speaks about the negative impact deforestation is having on the planet and the importance of intervention strategies to minimize its effect on the life on earth.
26. Children long ago spent ample time outdoors, exploring nature, playing in fields, and enjoying the wonders of the natural world.
27. Long ago children played outdoor and had no devices to capture their minds whereas the children of present occupy their time using devices and other gadgets.
28. **Figure of Speech:** Personification. / **Reason:** The tree is described as wise which is a human characteristic, suggesting the tree is had knowledge which the tree does not possess
29. **Captivate (line 7)** – attract / **Companion (line 11)** - friend
30. 1. Children were free to play outdoors in a safe and secure environment. / 2. Life was simple. Children interacted with nature and friends whereas in today's world they are constantly occupied with devices. This is hindering their social development
31. 1. Extra lessons/homework. / 2. Extra-Curricular activities
32. A line from the poem is: "Like love and laughter, they still sustain."
33. (a) Miss. Ann's Homework Centre posted this advertisement. / (b) Parents can employ the services of the centre from Monday to Saturday.
34. 1. The bold font/ Different types of fonts. / 2. The picture.
35. Two pieces of information that should be included in the advertisement are the location of the centre and the cost of the service.
36. 1. The child needs additional support which the parent is unable to give. / 2. The child has a test and requires help with preparation. (**Teacher's Discretion**)

Pennacool.com Test 10

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|--|--|--|
| 1. indiscipline
2. educators
3. devices
4. disruptions
5. structures
6. behavioural | 7. classmates,
8. atmosphere:
9. Bengal
10. day!
11. zoo's
12. Planet". | 13. discipline - disciplinary
14. intention - intentionally
15. with - in
16. their - his
17. since - despite
18. think - thought |
|--|--|--|
-
19. The story is set in the forest.
 20. The King asked Anansi to bring the snake full length on a pole because Anansi wanted children to call all stories after him.
 21. 1. released – freed / 2. revenge– vengeance/ retaliation/ pay back.
 22. Both Anansi and Blacksnake are cunning and intelligent; however, Anansi was able to outsmart Blacksnake quite easily because he was gullible and believed Anansi.
 23. I think blacksnake would have felt betrayed by Anansi because Anansi had tricked him into believing that his motive was to prove to the King that Blacksnake was longer than Yellow Tail Snake. After he was freed, he wanted revenge on Anansi.
 24. The story teaches us that honesty and integrity are important in relationships and that trickery and deceit can lead to negative consequences.
 25. A suitable title for the story is Anansi's Deception because Anansi used trickery and deceit to accomplish his mission.
 26. The spider is in the garden near a tree spinning a web.
 27. **A tiny acrobat** - The spider is compared to a tiny acrobat because of the skilful, graceful movements it makes as it spins its web / **A patient hunter** - The spider waits calmly and patiently in its web to catch its prey.
 28. The line "And tiny wings may lose their way" means that insects, which are small-winged creatures, may become trapped in the web which is difficult to see.
 29. **Armour** – protective covering / **Realm** - territory/area
 30. **Figure of Speech:** Simile / **Explanation:** Like an artist that uses brushes to create paintings with skill and speed, the spider moves its tiny legs rapidly to create its web
 31. The poet admires spiders and the manner in which they work to skilfully produce their webs and the patience the spider demonstrates as it waits to catch its prey.
 32. According to the poem, we should look for spiders' webs the next time we are in our yards so that we can observe the intricate and beautiful, shining homes that the spider skilfully weaves.
 33. 1. It helps students to manage time effectively by allocating specific time slots for different activities.
 2. Following a schedule teaches students to develop skills in organization and responsibility
 34. I think Rai has a well-balance schedule for his afternoon since he has allocated time for rest, homework, chores, and extra-curricular activities.
 35. Two activities that he can engage in are reading and playing a game. **(Teacher's discretion)**
 36. 1. He has set aside time for chores. / 2. He has allocated time to organize his clothes and book bag in preparation for school the next day. **(Teacher's Discretion)**

Pennacool.com Mock Test

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|---|---|---|
| <ol style="list-style-type: none"> 1. environmental 2. contaminants 3. atmosphere 4. industrialisation 5. threat 6. respiratory | <ol style="list-style-type: none"> 7. Creek 8. Please, 9. digested. 10. better.” 11. be! 12. shepherd’s | <ol style="list-style-type: none"> 13. binded - bound 14. support - supports 15. theirselves - themselves 16. or – since/because 17. frequent - frequently 18. litter - pride |
|---|---|---|
-
19. The creature King Midas found was a satyr that was half man and half goat. The satyr looked half-starved and very ill. King Midas brought the satyr into his castle. He made sure the satyr was washed and fed and tucked into bed for a good night's sleep.
 20. According to the story, King Midas was granted his wish because he had taken care of the Satyr that was the God, Dionysus, friend and teacher. Dionysus granted the wish to thank Midas for his kindness.
 21. **Wandered (line 27)** – roamed about aimlessly / **pity (line 32)** – feel sorry for
 22. In the fourth paragraph King Midas is thrilled and delighted when he realized that his wish had been granted whereas in the fifth paragraph his feelings changed to regret and sorrow.
 23. He asked for the wish to be taken back because his daughter, Marigold had turned into gold and Midas loved her more than anything in the world.
 24. The lesson that can be learnt is that we should not be greedy and that we should be think carefully before making decisions.
 25. A suitable title for the story is The Golden Touch/ Midas’ Wish/ King Midas Golden Touch/The Wish. The story is about the king who wished that everything he touched turned to gold and the wish was granted.
 26. The Amazon River began its journey in distant mountains.
 27. They provide shelter and are the home for various species of animals.
 28. The Amazon River is described as echoing a strong and pure song through the jungle. Yes, it is a suitable description because as the night approaches, all of the sounds created by the river and the animals will echo loudly through the peaceful, quiet jungle.
 29. 1. It is a vibrant ecosystem that provides habitat for a variety of animal species. / 2. It supports various communities that reside in the jungle.
 30. The main purpose of the poem on the Amazon River is to show the beauty, majesty, and importance of the river.
 31. **Teem (line 9)** - full of/ swarming with / **Verdant (line 14)** - green and covered with lush grass.
 32. I think the purpose of the third stanza is to emphasise that the river is an important ecosystem providing habitat to a wide variety of animals.
 33. (a) The Hillside Terrace Community Group is responsible for the notice. (b) The purpose of the notice is to inform members of the community about the meeting so that they could attend it.
 34. The word notice was written in bold font to attract readers’ attention and to make it easier to read.
 35. 1. Different fonts. / 2. Graphics/Pictures. **(Teacher discretion)**
 36. I think they may have decided to host this meeting because there may have been an increase in crime in the area and people may want to find out what they or the police can do to keep their community safe.