
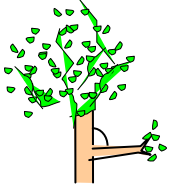
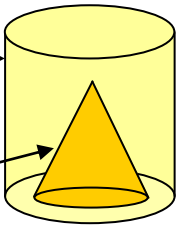

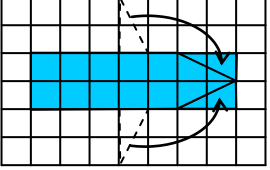
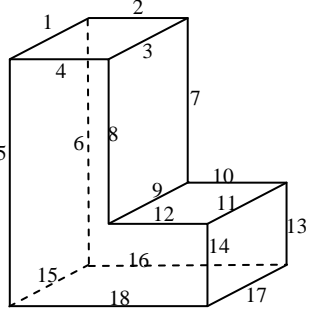



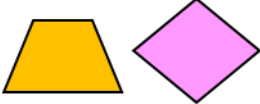
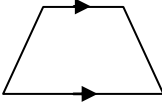
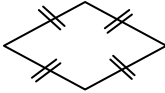
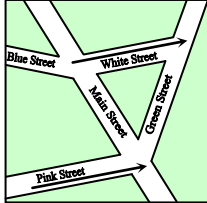
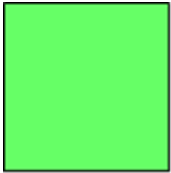
YEAR 5 – PAPER 7  
NUMERACY WORKED SOLUTIONS

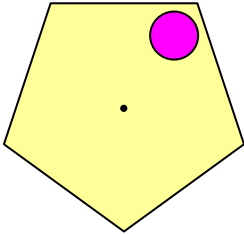
	ANSWER	EXPLANATION	AUSTRALIAN CURRICULUM REFERENCE A student can:
1	Six hundred and five dollars	This number has 6 in the hundreds column, zero in the tens column and 5 in the units column.	apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems. <a href="#">(ACMNA073)</a>
2	\$18	Sara saved $\$34 - \$16 = \$18$ more than her brother.	solve problems involving purchases and the calculation of change. <a href="#">(ACMNA080)</a>
3	$60 - 4$	Since $7 \times 8 = 56$ and the options are: $50 + 2 = 52$ $60 - 4 = 56$ $48 + 7 = 55$ $62 - 8 = 54$ then only $60 - 4$ has the same value.	recall multiplication facts up to $10 \times 10$ and related division facts. <a href="#">(ACMNA075)</a>
4		There are two of each type of card except for the butterfly which only has 1. Therefore, Kylie is least likely to select the butterfly.	describe possible everyday events and order their chances of occurring. <a href="#">(ACMSP092)</a>
5	July and September	March and May have $31 + 31 = 62$ days. July and August have $31 + 31 = 62$ days. July and September have $31 + 30 = 61$ days. August and October have $31 + 31 = 62$ days. Therefore, 'July and September' is correct.	convert between units of time. <a href="#">(ACMMG085)</a>

6		The first two trees show acute angles, and the fourth tree shows an obtuse angle. Only the third tree shows a right angle.	estimate, measure and compare angles using degrees. <a href="#">(ACMMG112)</a>
7	\$12	$4 \times \$2.95$ is approximately the same as $4 \times \$3$ , which is \$12.	use estimation and rounding to check the reasonableness of answers to calculations. <a href="#">(ACMNA099)</a>
8	41 000	40 852 is between 40 000 and 41 000, but is closer to 41 000. Hence, the population is 41 000 to the nearest thousand.	use estimation and rounding to check the reasonableness of answers to calculations. <a href="#">(ACMNA099)</a>
9	60	Amanda has $4 \times 15 = 60$ hair clips.	develop efficient mental and written strategies for multiplication. <a href="#">(ACMNA076)</a>
10	a cone inside a cylinder.	The outer solid is a cylinder and the inner solid is a cone. 	connect three-dimensional objects with their nets and other two-dimensional representations. <a href="#">(ACMMG111)</a>
11	74	$62 - 50 = 12$ and $50 - 38 = 12$ . Therefore, the number pattern is decreasing by 12. Hence, the missing number is $86 - 12 = 74$ .	describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction. <a href="#">(ACMNA107)</a>
12	18	There are 6 marbles to the right of the biggest marble and 11 to the left, plus the marble itself. Therefore, there are $6 + 1 + 11 = 18$ marbles.	use efficient mental and written strategies to solve problems. <a href="#">(ACMNA291)</a>

13	20	<p>Term 1 shows 2 rabbits.          Term 2 shows <math>2 + 3 = 5</math> rabbits.          Term 3 shows  <math>2 + 3 + 4 = 9</math> rabbits.          Term 4 shows  <math>2 + 3 + 4 + 5 = 14</math> rabbits.          Therefore, Term 5 will show  <math>2 + 3 + 4 + 5 + 6 = 20</math> rabbits.</p>	<p>describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction.  <a href="#">(ACMNA107)</a></p>
14	120	<p>The house symbol must represent 20 houses, as there is just 1 symbol for Lake Town and it has 20 houses.          So, as Hill Town has 6 symbols, it must have  <math>6 \times 20 = 120</math> houses.</p>	<p>construct suitable data displays from given or collected data. Include picture graphs where one picture can represent many data values.  <a href="#">(ACMSP096)</a></p>
15	<p>First clock</p> 	<p>The first clock-face shows 8:29.          The second clock-face shows 8:31.          The third clock-face shows 8:35.          The fourth clock-face shows 8:25.          Hence, the first clock-face shows the arrival time for the child who arrived second to school.</p>	<p>solve simple time problems.  <a href="#">(ACMMG086)</a></p>
16	2:10 pm	<p>3 hours after 10:40 am is 1:40 pm.          30 minutes after 1:40 pm is 2:10 pm.</p>	<p>use am and pm notation and solve simple time problems.  <a href="#">(ACMMG086)</a></p>
17	Triangular prism	<p>The net has 2 triangles and 3 rectangles. It could be folded to form a triangular prism.</p>	<p>connect three-dimensional objects with their nets and other two-dimensional representations.  <a href="#">(ACMMG111)</a></p>

18	14	 <p>If the triangles are moved as indicated by the arrows, it can be seen from the diagram that 14 small squares are shaded.</p>	<p>compare objects using familiar metric units of area and volume .  <a href="#">(ACMMG290)</a></p>
19	8	<p>From the table it can be seen that Year 5 Green had 8 students which spent less than 7 days at the beach.</p>	<p>describe and interpret different data sets in context.  <a href="#">(ACMSP120)</a></p>
20	18		<p>compare and describe two dimensional shapes that result from combining and splitting common shapes.  <a href="#">(ACMMG088)</a></p>
21	36 mm	<p>The length of the lid is <math>88 - 52 = 36</math> mm.</p>	<p>use scaled instruments to measure and compare lengths.  <a href="#">(ACMMG084)</a></p>
22	 <p>3 boats 2 cars</p>	<p>The last basket is the only one which has more boats than cars. Hence, this basket gives Donald the best chance at selecting a boat.</p>	<p>describe possible everyday events and order their chances of occurring.  <a href="#">(ACMSP092)</a></p>
23	24	<p>Since <math>72 \div 3 = 24</math>, then there must be 24 students in her class.</p>	<p>solve problems involving division by a one digit number, including those that result in a remainder.  <a href="#">(ACMNA101)</a></p>

24	10	<p>If the bus began with 28 people and then 8 got off, this means there would be 20 people left on the bus.</p> <p>But, there were 30 people on the bus after leaving the bus stop, indicating that <math>30 - 20 = 10</math> people got on.</p>	<p>use efficient mental and written strategies and apply to solve problems. (<a href="#">ACMNA291</a>)</p>
25		<p>A trapezium has one pair of parallel sides.</p>  <p>A rhombus has all four sides equal in length.</p> 	<p>compare and describe two dimensional shapes that result from combining and splitting common shapes. (<a href="#">ACMMG088</a>)</p>
26	White Street and Pink Street	 <p>The only pair of parallel streets on this map are White Street and Pink Street.</p>	<p>estimate, measure and compare angles using degrees. (<a href="#">ACMMG112</a>)</p>
27		<p>The rectangle has an area of <math>8 \times 2 = 16 \text{ cm}^2</math>.</p> <p>The square with sides 4 cm also has an area of <math>16 \text{ cm}^2</math>.</p>	<p>solve problems involving the comparison of lengths and areas using appropriate units. (<a href="#">ACMMG137</a>)</p>
28	9 cm	<p>As the sides of an equilateral triangle are equal in length, each side must be <math>27 \div 3 = 9 \text{ cm}</math>.</p>	<p>calculate the perimeter of rectangles using familiar metric units. (<a href="#">ACMMG109</a>)</p>

29	7	<p>6 cans of paint contain <math>6 \times 4 = 24</math> litres and 7 cans of paint contain <math>7 \times 4 = 28</math> litres.</p> <p>Since Peter needs 27 litres, then he must buy 7 cans of paint as 6 cans are not enough.</p>	<p>select and apply efficient mental and written strategies to solve problems involving all four operations with whole numbers.</p> <p><a href="#">(ACMNA123)</a></p>
30	south then west then south	<p>She walked south from the Library, then west along King Street then south along View Ave until she reached the mall.</p>	<p>describe routes using landmarks and directional language.</p> <p><a href="#">(ACMMG113)</a></p>
31	18	<p>If Tina pays \$2 at 3 toll gates, she pays a total of \$6 each trip.</p> <p>Since <math>\\$108 \div \\$6 = 18</math>, then she made 18 trips.</p>	<p>select and apply efficient mental and written strategies to solve problems involving all four operations with whole numbers.</p> <p><a href="#">(ACMNA123)</a></p>
32	9:25	<p>Daphne missed the 8:05 bus to Greentown. The next bus to Greentown leaves at 8:35, and so she will arrive at 9:25.</p>	<p>interpret and use timetables.</p> <p><a href="#">(ACMMG139)</a></p>
33		<p>The pentagon would be exactly upside down if it was rotated through <math>180^\circ</math>, and the pink circle would move with it from the bottom left of the diagram to the top right.</p>	<p>investigate combinations of translations, reflections and rotations.</p> <p><a href="#">(ACMMG142)</a></p>
34	100 kg	<p>Since <math>1 \text{ kg} = 1000 \text{ g}</math> then <math>100\,000 \div 1000 = 100 \text{ kg}</math></p>	<p>convert between common metric units of length, mass and capacity.</p> <p><a href="#">(ACMMG136)</a></p>

35	$\frac{75}{100}$	<p>Julia has shaded <math>\frac{6}{8}</math> which is equivalent to <math>\frac{3}{4} = \frac{75}{100}</math>.</p>	<p>make connections between equivalent fractions, decimals and percentages.  <a href="#">(ACMNA131)</a></p>
36	$\frac{3}{10}$	<p>Three pizzas are shared by 10 children, so the fraction each child will receive is <math>\frac{3}{10}</math>.</p>	<p>find a simple fraction of a quantity where the result is a whole number, with and without digital technologies.  <a href="#">(ACMNA127)</a></p>
37	600	<p>Since 150 more chickens were sold in the second week, then by subtracting this number from the total we get:  <math>1050 - 150 = 900</math> chickens.  This represents the total number of chickens sold over the two weeks, if the sales in each of these two weeks had been equal.  Hence, the shop sold  <math>900 \div 2 = 450</math> chickens in the first week and  <math>450 + 150 = 600</math> chickens in the second week.</p>	<p>select and apply efficient mental and written strategies to solve problems involving all four operations with whole numbers.  <a href="#">(ACMNA123)</a></p>
38	6	<p>By folding the net of the die we can see that if 2 is on the top face, then 5 is on the bottom face.  Also, if 6 is on the top face then 1 is on the bottom face.  Hence, the sum of the numbers on the bottom faces is  <math>5 + 1 = 6</math>.</p>	<p>connect three-dimensional objects with their nets and other two-dimensional representations.  <a href="#">(ACMMG111)</a></p>

39	140	<p>David drank <math>\frac{4}{10}</math> of a can more than Kevin.</p> <p><math>\frac{1}{10}</math> of a 350 mL can is 35 mL</p> <p>so <math>\frac{4}{10}</math> is <math>4 \times 35 = 140</math> mL.</p>	<p>find a simple fraction of a quantity where the result is a whole number.</p> <p><a href="#">(ACMNA127)</a></p>												
40	3	<p>The total cost of 10 children was <math>10 \times \\$15 = \\$150</math>.</p> <p>So, the cost for the remaining 9 visitors was <math>\\$360 - \\$150 = \\$210</math>.</p> <p>By trial and error as shown in the table:</p> <table border="1"> <thead> <tr> <th>Seniors</th> <th>Adults</th> <th>total</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>8</td> <td><math>1 \times \\$20 + 8 \times \\$25 = \\$220</math></td> </tr> <tr> <td>2</td> <td>7</td> <td><math>2 \times \\$20 + 7 \times \\$25 = \\$215</math></td> </tr> <tr> <td>3</td> <td>6</td> <td><math>3 \times \\$20 + 6 \times \\$25 = \\$210</math></td> </tr> </tbody> </table> <p>From above we can see that for the remaining 9 guests to pay \$210 then there must have been 3 seniors and 6 adults.</p>	Seniors	Adults	total	1	8	$1 \times \$20 + 8 \times \$25 = \$220$	2	7	$2 \times \$20 + 7 \times \$25 = \$215$	3	6	$3 \times \$20 + 6 \times \$25 = \$210$	<p>use efficient mental and written strategies to solve problems.</p> <p><a href="#">(ACMNA291)</a></p>
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