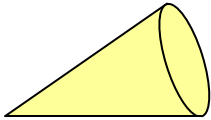
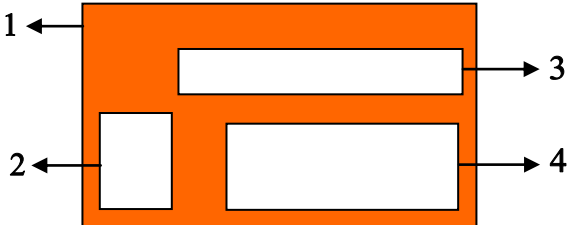
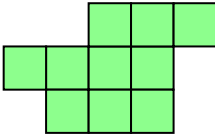

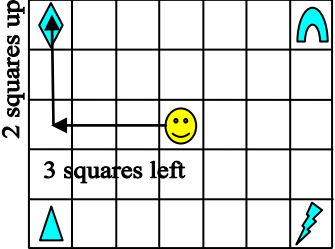
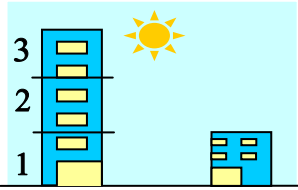
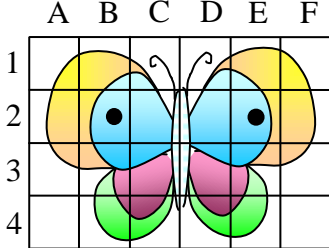
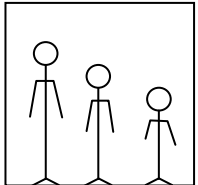
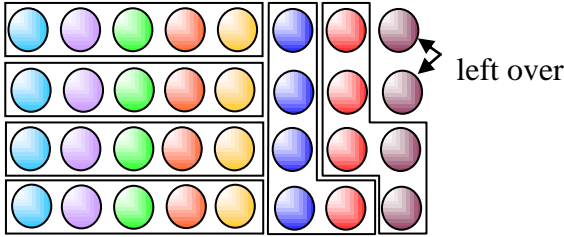
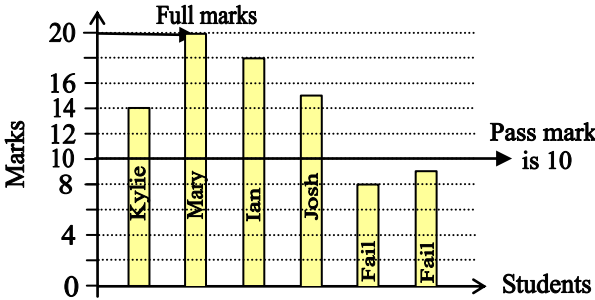
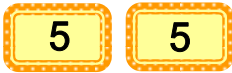
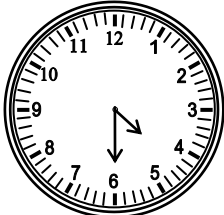
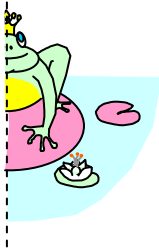
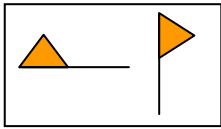




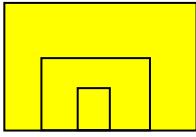
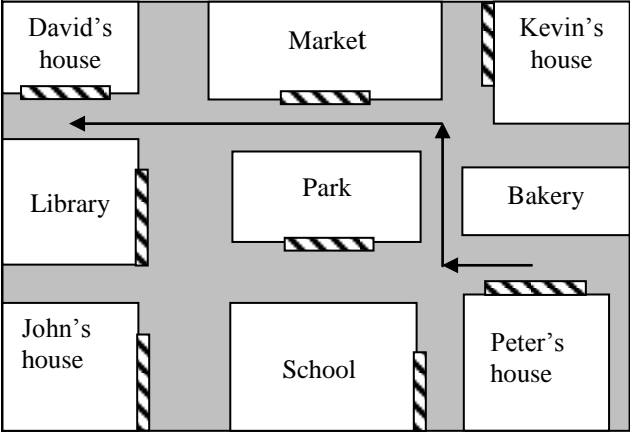
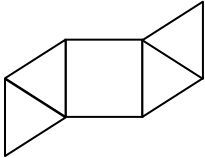
YEAR 3 – PAPER 3
NUMERACY WORKED SOLUTIONS

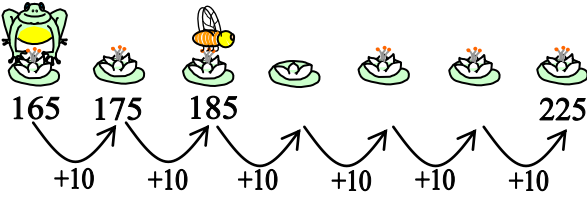
	ANSWER	EXPLANATION	Australian Curriculum Reference A student can
1		A cone has a circular base and a point at the other end.	describe the features of three-dimensional objects. (ACMMG043)
2	4		describe and draw two-dimensional shapes. (ACMMG042)
3	\$1.65	\$1 and 50c make \$1.50. 10c and 5c make 15c Therefore, the total is \$ 1.65.	count and order small collections of Australian coins and notes according to their value. (ACMNA034)
4	12	Half the lollies were eaten so half the lollies remained. Since half the total number of lollies is 6, then 12 lollies were in the bowl.	recognise and interpret common uses of halves of shapes and collections. (ACMNA033)
5	\$60 less than the skirt	The shirt is less than the skirt by $\$183 - \$123 = \$60$	count the change required for simple transactions to the nearest five cents. (ACMNA059)
6	5×6	There are 6 cups, each with 5 cherries. This means there are 5 lots of 6, which is 5×6 .	recognise and represent multiplication as repeated addition. (ACMNA031)

7		<p>The area of the last shape is 10 square units.</p> <p>The area of each of the first 3 shapes is 9 square units.</p> <p>Hence, the last shape has the largest area.</p>	<p>compare and order several shapes and objects based on area using appropriate uniform informal units.</p> <p>(ACMMG037)</p>
8			<p>create and interpret simple grid maps to show position and pathways.</p> <p>(ACMMG065)</p>
9	6E	<p>Only 6E has Football and Netball as the most popular sports.</p>	<p>create displays of data using tables and interpret them.</p> <p>(ACMSP050)</p>
10	45 m	<p>As shown, the height of the taller building is about three times the height of the shorter building.</p>  <p>Hence, the taller building is about 3 lots of 15 which is 45 m.</p>	<p>measure, order and compare objects using familiar metric units of length.</p> <p>(ACMMG061)</p>
11	E2	<p>When the picture is completed the black spot will be in E2, as shown.</p> 	<p>investigate the effect of one-step slides and flips.</p> <p>(ACMMG045)</p>
12		<p>Only the third picture has the shortest at one end and the tallest at the other end. All other pictures are not sorted in order of height correctly.</p>	<p>compare and order several shapes and objects based on length, using appropriate uniform informal units.</p> <p>(ACMMG037)</p>

13	2	<p>As we can see, he can make six groups of five and he will take out the left over two marbles.</p> 	<p>recognise and represent division as grouping into equal sets and solve simple problems using these representations. (ACMNA032)</p>
14	Impossible	<p>There is no Red section on this spinner. Hence, it is impossible to stop on Red.</p>	<p>describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible'. (ACMSP047)</p>
15	$\frac{1}{3}$	<p>There are 12 chooks altogether. Four of them are on the tray. The fraction of chooks on the tray is $\frac{4}{12}$. This is the same as $\frac{1}{3}$.</p>	<p>model and represent unit fractions including $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$ and their multiples to a complete whole. (ACMNA058)</p>
16	14		<p>collect data, organise into categories and create displays using simple column graphs. (ACMSP069)</p>
17		<p>Only two of the cards show the same number, which is 5. No other two cards show the same number.</p>	<p>describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible'. (ACMSP047)</p>

18	Week 3	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="5">Sports Timetable</th> </tr> <tr> <th></th> <th>Week 1</th> <th>Week 2</th> <th>Week 3</th> <th>Week 4</th> </tr> </thead> <tbody> <tr> <td>Year 6A</td> <td>Ice skating</td> <td>Soccer</td> <td>Tennis</td> <td>Basketball</td> </tr> <tr> <td>Year 6B</td> <td>Basketball</td> <td>Tennis</td> <td>Soccer</td> <td>Ice skating</td> </tr> <tr> <td>Year 6C</td> <td>Tennis</td> <td>Ice Skating</td> <td>Basketball</td> <td>Soccer</td> </tr> </tbody> </table>	Sports Timetable						Week 1	Week 2	Week 3	Week 4	Year 6A	Ice skating	Soccer	Tennis	Basketball	Year 6B	Basketball	Tennis	Soccer	Ice skating	Year 6C	Tennis	Ice Skating	Basketball	Soccer	interpret and compare data displays. (ACMSP070)
Sports Timetable																												
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Year 6B	Basketball	Tennis	Soccer	Ice skating																								
Year 6C	Tennis	Ice Skating	Basketball	Soccer																								
19		This clock shows 4:30, as its hour hand is halfway between 4 and 5 and its minute hand points at 6.	tell time to the quarter-hour, using the language of 'past' and 'to'. (ACMMG039)																									
20		Only the second drawing matches the first half of the drawing. The other drawings do not show both the flower and the lilly pad in the water beside the frog.	identify symmetry in the environment. (ACMMG066)																									
21		After the first quarter turn, the shape will be like this:  After the second quarter turn, it will be like this: 	identify and describe half and quarter turns. (ACMMG046)																									
22	25	The pattern is made by subtracting 6 from each term to get the next term. So $31 - 6 = 25$.	describe, continue, and create number patterns resulting from performing subtraction. (ACMNA060)																									
23	36	The pattern is formed by adding 5 matchsticks to a shape to form the next shape. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Shape</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> </tr> </thead> <tbody> <tr> <td>Matchsticks Needed</td> <td>16</td> <td>21</td> <td>26</td> <td>31</td> <td>36</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>+5</td> <td>+5</td> <td>+5</td> <td>+5</td> </tr> </tbody> </table>	Shape	3	4	5	6	7	Matchsticks Needed	16	21	26	31	36									+5	+5	+5	+5	describe, continue, and create number patterns resulting from performing addition. (ACMNA060)	
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Matchsticks Needed	16	21	26	31	36																							
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24		Looking directly at the solid from the front you would see 3 rectangles like this.	make models of three-dimensional objects and describe key features. (ACMMG063)
25	\$400	From the graph, Denis sold 40 trays of mangoes on Saturday. As each tray was sold for \$10, he made 40 lots of \$10, which is \$400.	interpret and compare data displays. (ACMSP070)
26	David		create and interpret simple grid maps to show position and pathways. (ACMMG065)
27		Only this net will form a square pyramid when folded.	make models of three-dimensional objects and describe key features. (ACMMG063)
28	7	Start with Robyn's answer of 18 and work backwards by reversing the operations. So $18 - 4 = 14$ and then half of 14 is 7. Hence, Robyn started with 7.	represent and solve problems involving multiplication using efficient mental and written strategies. (ACMNA057)
29	81	To find the number, reverse the operation. That is $33 + 48 = 81$	recognise and explain the connection between addition and subtraction. (ACMNA054)
30	10	Last year Daniela was 18, so Kevin was half of 18. This means he was 9. This year Kevin must be one year older than 9, that is 10.	represent and solve problems involving multiplication using efficient mental and written strategies. (ACMNA057)

31	185	 <p>There are six equal spaces between 165 and 225, and $225 - 165 = 60$. So each space is 10. Hence, the bee is above $165 + 10 + 10 = 185$.</p>	describe, continue, and create number patterns resulting from performing addition. (ACMNA060)															
32	\$20	<p>By subtracting \$10, Bill and Ben will have an equal share of the remaining \$40.</p> <p>As half of \$40 is \$20, then Ben has \$20. Bill has $\\$20 + \\$10 = \\$30$.</p>	solve simple addition and subtraction problems using a range of efficient mental and written strategies. (ACMNA030)															
33	\$25	<p>Melissa saved $\frac{1}{4}$ of \$20 which is \$5.</p> <p>Their total is $\\$20 + \\$5 = \\$25$.</p>	model and represent unit fractions including $\frac{1}{2}$ and $\frac{1}{4}$ and their multiples to a complete whole. (ACMNA058)															
34	10	<p>Frank gets \$10 for 2 deliveries.</p> <p>This means he gets \$5 for 1 delivery.</p> <p>Since 10 lots of \$5 make \$50, then he needs to do 10 deliveries to get this money.</p>	represent and solve problems involving multiplication using efficient mental and written strategies. (ACMNA057)															
35	5	<p>By trial and error, as shown in the table, we can realise that Tom has 5 of the \$2 coins.</p> <table border="1" data-bbox="512 1659 1134 1973"> <thead> <tr> <th>Number of 50c coins</th> <th>Number of \$2 coins (one more than the 50c coins)</th> <th>Total value</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>\$4.50</td> </tr> <tr> <td>2</td> <td>3</td> <td>\$7</td> </tr> <tr> <td>3</td> <td>4</td> <td>\$9.50</td> </tr> <tr> <td>4</td> <td>5</td> <td>\$12</td> </tr> </tbody> </table>	Number of 50c coins	Number of \$2 coins (one more than the 50c coins)	Total value	1	2	\$4.50	2	3	\$7	3	4	\$9.50	4	5	\$12	represent and solve problems involving multiplication using efficient mental and written strategies. (ACMNA057)
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