



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

ANNUAL NATIONAL ASSESSMENT

GRADE 6

MATHEMATICS

TERM 1: 2012 EXEMPLAR

MEMORANDUM



COUNT FORWARDS AND BACKWARDS IN DECIMALS TO AT LEAST 2 DECIMAL PLACES.

		Marks
1.	C	1
2.	C	1
3.	B	1
4.	0,25 ; 0,3 ; 0,35 ; 0,4 ; <u>0,45</u> add 0,05 to get the next number	2
5.	0,38	1
6.	<u>1,25</u> ; <u>1,5</u> ; <u>1,75</u>	2
7.		2
8.		2
9.	7 050; 7020; 6990	2
10.		2

RECOGNISE, REPRESENT, DESCRIBE AND COMPARE WHOLE NUMBERS TO AT LEAST 9-DIGITS.

Circle the letter of the correct answer in question 1-2.		Marks
1.	C	1
2.	C	1
3.	2 385749	1
4.	5 967 204; 19 234 556	2
5.	6 000 000	1
6.	$3\ 567\ 439 = (3 \times 1\ 000\ 000) + (5 \times 100\ 000) + (6 \times 10\ 000) + 7\ 000 + 400 + 39$	3
7.	$40\ 000\ 000 + 2\ 000\ 000 + 600\ 000 + 30\ 000 + 1000 + 600 + 20 + 7$	3
8.	23 175	1
9.	413 123 342 123 212 143 123 243	2

10.	Athletics was the most popular sport with 2 165 001 spectators	1
11.	23 475 (23 450 + 23 500) ÷ 2	1
12.	657 342 109	1
13.	Two hundred and thirty four thousand seven hundred and nine	1

RECOGNISE THE PLACE VALUE OF WHOLE NUMBERS TO AT LEAST 9-DIGIT NUMBERS.

Circle the letter of the correct answer in question 1-4.		Marks
1.	C	1
2.	A	1
3.	C	1
4.	B	1
5.	20 000 000	1
6.	Ten Million	1
7.	3315 427 687 or any other correct number	1
8.	a) How many people are indicated by the digit 5 in the number for the Country B? 50 000 000 people b) How many people are indicated by the digit 3 in the number for the Country A? 300 000 people	2
9.	R40 + R3 + R0, 30 + R0, 06 = R43,36	1

RECOGNISE MULTIPLES AND FACTORS OF WHOLE NUMBERS.

Circle the letter of the correct answer in question 1-3.		Marks
1.	C	1
2.	B	1
3.	B	1
4.	4.1 Yes 4.2 Yes	1 1
5.	5.1 256; 512; 1 024; 2048 ; <u>4096</u> ; <u>8192</u>	2
	5.2 Multiply each number by 2 to get the next number.	1
6.	49	1
7.	1; 3; 5; 9; 15; 25; 45; 75; 225	1
8.	8	1
9.	1 and 125 5 and 25	2
10.	21; 42; 63	2
11.	36	1
12.	3 and 19	2

RECOGNISE PRIME NUMBERS TO AT LEAST 100.

Circle the letter of the correct answer in question 1.		Marks
1.	D	1
2.	29 and 31	2
3.	101	1

4.	2	1
5.	5.1 61	1
	5.2 57	1

THE ADDITIVE PROPERTY OF 0 THE MULTIPLICATIVE PROPERTY OF 1.

		Marks
1.	$578 = 0 + 578$	1
2.	$47\ 893 - 0 = 47\ 893$	1
3.	Complete the following problem about number: $0 + 95 = \underline{95}$ and $95 - 0 = \underline{95}$ therefore $0 + 95 = 95 - 0$	1
4.	When we add zero to a number, the number is unchanged	1
5.	$24\ 367 \times 0 + 1 = 1$	1
6.	$47\ 983 \times 1 = 47\ 983$	1
7.	True	1

RECOGNISE AND USE EQUIVALENT FORMS OF NUMBERS INCLUDING: COMMON FRACTIONS; DECIMAL FRACTIONS AND PERCENTAGES.

Circle the letter of the correct answer in question 1-2.		Marks
1.	C	1
2.	B	1
3.	$75\% = \frac{3}{4}$ $5\% = 0,25$	2
4.	$\frac{45}{100} = \frac{9}{20}$	1
5.	3,8 , 0,38 , 0,375	3
6.		2
7.	$\frac{3}{8} \rightarrow 37,5\%$ $\frac{7}{14} \rightarrow 0,5$	2
8.	$\frac{1}{3} = \frac{2}{6} = \frac{3}{9}$	1
9.	$\frac{2}{3}$	1

10.	10.1 $\frac{1}{4} > \frac{1}{10}$	1
	10.2 $12,5 > \frac{1}{8}$	1
10.3	100% = 1	1
11	11.1 25%	1
	11.2 0,25	1
	11.3 Fraction $\frac{1}{4}$	1
12.	$\frac{27}{50} \times \frac{2}{2} = \frac{54}{100} = 54\%$	1
13.	$\frac{68}{100} = \frac{54}{100} \div \frac{2}{2} = \frac{34}{50}$ He got 34 out of 50	2
14.	$\frac{3}{4} = \frac{12}{16}$	1
15.	Fraction for Pule = $\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$ Therefore SAM ate the most chocolate	2

ROUND OFF TO THE NEAREST 5, 10, 100 OR 1000.

Circle the letter of the correct answer in question 1-3.		Marks
1.	B	1
2.	D	1
3.	D	1
4.	24 100	1
5.	341, 342, 399, 398	1
6.	R46, 40	1

ADD AND SUBTRACT WHOLE NUMBERS

1.	1.1	Number of tickets sold= 4 629 592 $\begin{array}{r} 1625\ 407 \\ 68\ 945 \\ 2\ 165\ 001 \\ +770\ 239 \\ \hline 4\ 629\ 592 \end{array}$	3
	1.2	Number of tickets = 1 394 762 $\begin{array}{r} 2\ 165\ 001 \\ -\ 770\ 239 \\ \hline 1\ 394\ 762 \end{array}$	2
2.	2.1	3 423 567	3

		$\begin{array}{r} 766\ 678 \\ + 2\ 378\ 487 \\ \hline 6\ 568\ 732 \end{array}$	
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	2.2	$\begin{array}{r} 3\ 032\ 512 \\ - 1\ 753\ 769 \\ \hline 1\ 278\ 743 \end{array}$	2
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3.	Number of children = $41\ 295 - (23\ 985 + 11\ 378)$ $= 41\ 295 - 35\ 363$ $= 5\ 932$		3
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4.	$6\ 467 - 2684$		2																														
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td></td> <td>6</td> <td>4</td> <td>6</td> <td>7</td> <td></td> </tr> <tr> <td>-</td> <td>2</td> <td>6</td> <td>8</td> <td>4</td> <td></td> </tr> <tr> <td></td> <td>3</td> <td>4</td> <td>6</td> <td>7</td> <td>$6\ 467 - 3\ 000 = 3\ 467$</td> </tr> <tr> <td>+</td> <td></td> <td>3</td> <td>1</td> <td>6</td> <td>$3\ 000 - 2\ 684 = 316$</td> </tr> <tr> <td></td> <td>3</td> <td>7</td> <td>8</td> <td>3</td> <td></td> </tr> </table>			6	4	6	7		-	2	6	8	4			3	4	6	7	$6\ 467 - 3\ 000 = 3\ 467$	+		3	1	6	$3\ 000 - 2\ 684 = 316$		3	7	8	3		
	6	4	6	7																													
-	2	6	8	4																													
	3	4	6	7	$6\ 467 - 3\ 000 = 3\ 467$																												
+		3	1	6	$3\ 000 - 2\ 684 = 316$																												
	3	7	8	3																													

5.	$\begin{array}{r} 1\ 302\ 301 \\ - 236\ 498 \\ \hline 1\ 065\ 803 \end{array}$		3
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6.	Number = $1\ 503\ 674 - 354\ 378 = 1\ 149\ 296$		1
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7.	Number of sheep now = $2\ 957 - 134 + 813 = 3\ 636$ $\begin{array}{r} 2\ 957 \\ - 134 \\ \hline 2\ 823 \\ + 813 \\ \hline 3\ 636 \end{array}$		3
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**ADD AND SUBTRACT COMMON FRACTIONS IN WHICH ONE DENOMINATOR IS A MULTIPLE OF ANOTHER.
ADD AND SUBTRACT MIXED NUMBERS.**

1.	1.1	$\frac{5}{12} + \frac{1}{6}$ $= \frac{5}{12} + \frac{2}{12}$	3
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		$= \frac{7}{12}$	
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	1.2	$\frac{5}{8} - \frac{1}{2}$ $= \frac{5}{8} - \frac{4}{8}$ $= \frac{1}{8}$	2
2.	2.1	$\left(\frac{11}{8} + \frac{1}{4} \times \frac{2}{2}\right) = \frac{11}{8} + \frac{2}{8} = \frac{13}{8}$	2
	2.2	$3\frac{1}{6} - 2\frac{1}{3}$ $= \frac{19}{6} - \frac{7}{3}$ $= \frac{19}{6} - \frac{14}{6}$ $= \frac{5}{6}$	2
3.		$1 - \left(\frac{3}{8} + \frac{1}{4}\right)$ $= 1 - \left(\frac{3}{8} + \frac{2}{8}\right)$ $= 1 - \frac{5}{8}$ $= \frac{3}{8}$	3
4.		<p>Numbers of learners absent = $\frac{3}{8} \times 960$</p> $= 3 \times (960 \div 8)$ $= 3 \times 120$ $= 360$	2
5.		$\frac{5}{12}$ of 480	2

	$= 5 \times (480 \div 12)$ $= 5 \times 40$ $= 200$	
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6.	$\frac{1}{2}$ of 80smarties=40 $\frac{1}{4}$ of 120smarties = 30 Claire will choose half of 80 smarties.	2
7.	7.1 $\text{Content} = \frac{2}{3} + \frac{1}{6} = \frac{4}{6} + \frac{1}{6} = \frac{5}{6}$ The pond is $\frac{5}{6}$ full.	2
	7.2 $\frac{5}{6} + \frac{1}{3} = \frac{5}{6} + \frac{2}{6} = \frac{7}{6} = 1\frac{1}{6}$ The dam will overflow because $1\frac{1}{6}$ is more than $\frac{6}{6}$	1

MULTIPLY A 4-DIGIT NUMBER BY A 3-DIGIT NUMBER (IN COLUMNS).

1.	Number of Oranges = $2\ 139 \times 428 = 915\ 492$ $\begin{array}{r} 2\ 139 \\ \times 428 \\ \hline 17\ 112 \\ +\ 42\ 780 \\ \hline 855\ 600 \\ \hline 915\ 492 \end{array}$	4
2.	$\begin{array}{r} 7\ 876 \\ \times 393 \\ \hline 23\ 628 \\ 708\ 840 \\ +\ 2362\ 800 \\ \hline 3\ 095\ 268 \end{array}$	4
3.	3.1 Number of heartbeats = $78 \times 30 = 780 \times 3 = 2340$	2
	3.2 Number of heartbeats = $2 \times 2\ 340 = 4680$	2
4.	Number = $879 \times 536 = 471\ 144$ $\begin{array}{r} 8\ 7\ 9 \end{array}$	4

	$\begin{array}{r} \text{X } 536 \\ + 5274 \\ \hline 26370 \\ \hline 439500 \\ \hline 471144 \end{array}$	
5.	Number of boys = $253 + 189 = 442$ Total number of learners in a camp = $2 \times 442 = 884$	3

DIVIDE A 4-DIGIT NUMBER BY A 3-DIGIT NUMBER (USING LONG DIVISION).

1.	$\begin{array}{r} \\ \underline{476} \overline{) 284650} \\ - 2380 \\ \underline{ 4665} \\ - 4284 \\ \underline{ 3810} \\ - 3808 \\ \\ \end{array}$ <p>Remainder = 2</p>	4
2.	Number of plants = 235×17 $= 235 \times (10 + 7)$ $= (235 \times 10) + (235 \times 7)$ or long multiplication $= 2350 + 1645$ $= 3995$ Number of tomatoes = 3995×11 $= 43945$ Total number of tomatoes to be packed = $43945 - 34$ $= 43911$ Number of packets to the wholesaler = $43911 \div 13 = 3454$ $\begin{array}{r} \\ \underline{13} \overline{) 43911} \\ - 39 \\ \underline{ 49} \\ - 42 \\ \underline{ 71} \\ - 65 \\ \\ \end{array}$ <p style="text-align: right;">$\frac{5}{9} \frac{2}{9}$</p>	6

**ADD AND SUBTRACT POSITIVE DECIMAL NUMBERS WITH AT LEAST 2 DECIMAL PLACES.
MULTIPLY DECIMAL FRACTIONS BY 10 AND 100.**

Circle the letter of the correct answer in question 1.		Marks
1.	A	1
2.	$3,23 + 5,62 = 8,85$	1
3.	$6 - 2,34 = 6,00 - 2,34 = 3,66$	1
4.	$2,4 + 4,2 - \underline{\quad} = 0,28$ $6,6 - \underline{\quad} = 0,28$ $6,6 - 6,32 = 0,28$	3
5.	True	1

RECOGNISE AND USE DIVISIBILITY RULES FOR 2, 3, 4, 5, 10, 100, AND 1000.

Circle the letter of the correct answer in question 1.		Marks
1	B and D	1
2. (a)	True	1
(b)	True	1
(c)	True	1

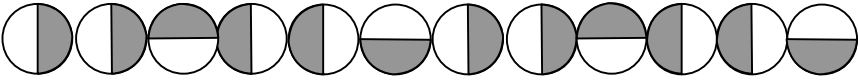
USE MULTIPLE OPERATIONS ON WHOLE NUMBERS (WITH OR WITHOUT BRACKETS).

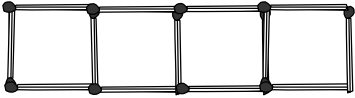
Circle the letter of the correct answer in question 1 - 3.		Marks
1.	A	1
2.	C	1
3.	C	1
4.	4.1 $2 + 3 \times 4$ $= 2 + 12$ $= 14$	2
	4.2 $2 \times 4 + 3 \times 2$ $= 8 + 6$ $= 14$	1
	4.3 $4 + 8 \div 2 - 4$ $= 4 + 4 - 4$ $= 4$	1
	4.4 $6 - 10 + 6$ $= 12 - 10$ $= 2$	1
5.	x	1
6.	90	1

PROBLEM SOLVING





1.	1.1	Profit = R5, 50 – R3, 45 = R2, 05	1																		
	1.2	Profit = R2,05 x 67 = R 134 + R3, 35 = R137, 35	2																		
	1.3	Loss = (R3,45 – R2,95) x 15 = R0,50 x 15 = R7,50	2																		
2.		Discount = 10% of R250 $= \frac{1}{10} \text{ of } R250$ $= R25,00$ Cost = R250 – R25 $= R225$ Or Discounted Price = 90% of R250 $= \frac{9}{10} \text{ of } R250$ $= 9 \times R25$ $= R225$	3																		
3.		Number of children = $\frac{1}{5} \text{ of } 1295$ $= 259$ Number of adults = 1 295 – 259 $= 1 036$	3																		
4.		Distance = 12,5 x 120 $= 12,5 \times 10 \times 12 \text{ km}$ $= 125 \times 12 \text{ km}$ $= 1500 \text{ km}$ <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tbody> <tr> <td>Time in hours</td> <td>1</td> <td>2</td> <td>3</td> <td>8,5</td> <td>10</td> <td>11</td> <td>12</td> <td>12,5</td> </tr> <tr> <td>Distance in km</td> <td>120</td> <td>240</td> <td>360</td> <td>1020</td> <td>1200</td> <td>1320</td> <td>1440</td> <td>1500</td> </tr> </tbody> </table>	Time in hours	1	2	3	8,5	10	11	12	12,5	Distance in km	120	240	360	1020	1200	1320	1440	1500	2
Time in hours	1	2	3	8,5	10	11	12	12,5													
Distance in km	120	240	360	1020	1200	1320	1440	1500													
5.		Income in 7 days = 8 x R9, 50 x 7 $= R76,00 \times 7$ $= R532,00$	3																		
6.		$\$35 = R7, 67 \times 35$ $= R7,67 \times 7 \times 5$ $= R53,69 \times 5$ $= R 268, 45$	3																		

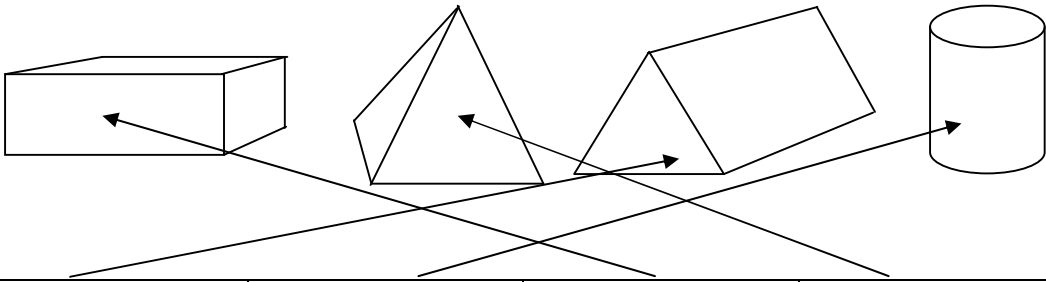
INVESTIGATE AND EXTEND GEOMETRIC PATTERNS LOOKING FOR A RELATIONSHIP.

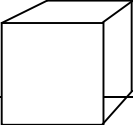
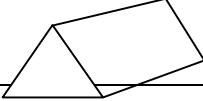
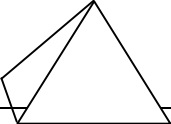
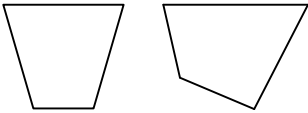
		Marks																									
1.	B	1																									
2.		2																									
3.	3.1 <table border="1" style="margin-left: 40px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																										1
	3.2 <table border="1" style="margin-left: 40px;"> <tr> <td>Diagram number</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>8</td> <td>10</td> <td>23</td> <td><i>n</i></td> </tr> <tr> <td>No. of small squares</td> <td>1</td> <td>4</td> <td>9</td> <td>16</td> <td>64</td> <td>100</td> <td>529</td> <td>$n \times n$</td> </tr> </table>	Diagram number	1	2	3	4	8	10	23	<i>n</i>	No. of small squares	1	4	9	16	64	100	529	$n \times n$	2							
Diagram number	1	2	3	4	8	10	23	<i>n</i>																			
No. of small squares	1	4	9	16	64	100	529	$n \times n$																			
	3.3	By adding one square in each row and column.	1																								
	3.4	By multiplying the diagram number by itself.	1																								
4.	4.1	29	1																								
	4.2	<table style="margin-left: 40px;"> <tr> <td>1</td> <td>2</td> <td>4</td> <td>7</td> <td>11</td> <td>16</td> <td>22</td> </tr> <tr> <td></td> <td>+1</td> <td>+2</td> <td>+3</td> <td>+4</td> <td>+5</td> <td>+6</td> <td>+7</td> </tr> </table> <p style="margin-left: 40px;">Next term is 29 because $22 + 7 = 29$</p> <p style="margin-left: 40px;">Add 8 to 29</p>	1	2	4	7	11	16	22		+1	+2	+3	+4	+5	+6	+7	1									
1	2	4	7	11	16	22																					
	+1	+2	+3	+4	+5	+6	+7																				
5.	<table border="1" style="margin-left: 40px;"> <tr> <td>Number of tables</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Number of people</td> <td>10</td> <td>12</td> <td>14</td> <td>16</td> </tr> </table>		Number of tables	4	5	6	7	Number of people	10	12	14	16															
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Number of people	10	12	14	16																							
	5.1	12 people	1																								
	5.2	9 tables	1																								
	5.3	$2 = 2 \times 9 + 2$	1																								
	5.4	14 tables	1																								
6.	A= 6 and B= 42		2																								
7.	7.1	3; 7; 12; 18; <u>25</u> ; <u>33</u> ; <u>42</u> ; <u>52</u> .	2																								
	7.2	1; 1; 2; 3; 5; <u>8</u> ; <u>13</u> ; <u>21</u> ; <u>34</u>	2																								

8.									1
9.	No. of squares	1	2	3	4	5	10	20	3
	No. of matches needed	4	7	10	13	16	31	61	
10.	$\Delta = 12$								1
11.	$36 \div 3 - 3 = 9$								1
12.	Amount earned = R150 x 5 x 6								1
13.	A church has 27 rows of chairs and each row can seat 23 people. Fifteen people are on stage singing. How many people are in the church?								2


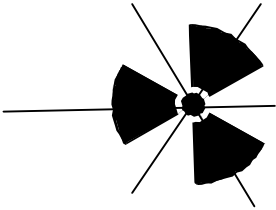
2-D SHAPES AND 3-D OBJECTS

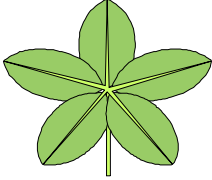
				Marks	
1.					
					4
	Rectangle	Octagon	Circle	Triangle	

2.	Draw lines to name each of the following 3D objects.				4
					
	Triangular prism	Cylinder	Rectangular prism	Pyramid	
3.	<ul style="list-style-type: none"> • They are both quadrilaterals • They each have 4 right angles • Opposite sides are parallel • Opposite sides are equal 				4


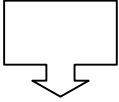
4.	4.1	Triangular prism			1	
	4.2	There are two triangular faces			1	
5.			Cube  6	Triangular prism  5	Square-based Pyramid  5	4
	Number of faces	6	5	5		
	What shape/s are the faces?	square	Triangles and rectangles	Triangles and a square		
	How many vertices (corners)?	8	6	5		
	Number of edges?	12	9	8		
	How many curved surfaces?	0	0	0		
6.			They are quadrilaterals		1	

RECOGNISE, DRAW AND DESCRIBE LINE(S) OF SYMMETRY IN 2-D SHAPES. SYMMETRY

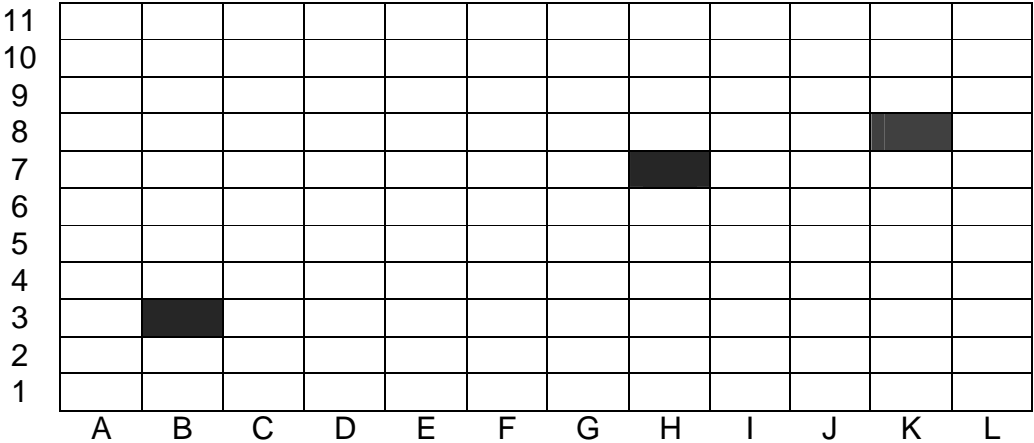
1.	1 0		1
2.			1
3.	B and C		2

4			1
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USE THE PROPERTIES OF ROTATIONS, REFLECTIONS AND TRANSLATIONS TO DESCRIBE TRANSFORMATIONS OF 2-D SHAPES AND 3-D OBJECTS. TRANSFORMATIONS

1.	1.1	Horizontal translation	1
	1.2	Translation and reflection	1
	1.3	Horizontal translation	1
	1.4	Rotation	1
			1
2.			1
3.			1
4.	Reflects		

POSITION

1.	1.1		1
	1.2	K8	
2.	B		1
3.	W		
4.	3		1

TIME

1.	10: 08 and 8 minutes past 10	1																		
2.		1																		
3.	Forty nine minutes past twelve or Eleven minutes to one or eleven minutes to one.	1																		
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6.	One hour forty minutes or 1h 40min.	1																		
7.	07:30	1																		
8.	<p>5 minutes = <u>300</u> seconds($5 \times 60 = 300$)</p> <p>17 hours= <u>1 020</u> minutes($17 \times 60 = 170 \times 6 = 1020$)</p> <p>4 hours= <u>14 400</u> seconds($4 \times 60 \times 60 = 240 \times 60 = 14 400$)</p> <p>1 week = <u>10 080</u> minutes($4 \times 60 \times 60 = 168 \times 60 = 10 080$)</p> <p>2150 years = 215 decades</p>	6																		
9.	8hours 15 minutes.	1																		
10.	<p>Time spent = $7 \times 45 \times 6$ minutes</p> <p>= 315×6 minutes</p> <p>= 31h 30 minutes ($315 \times 6 \div 60$)</p>	3																		

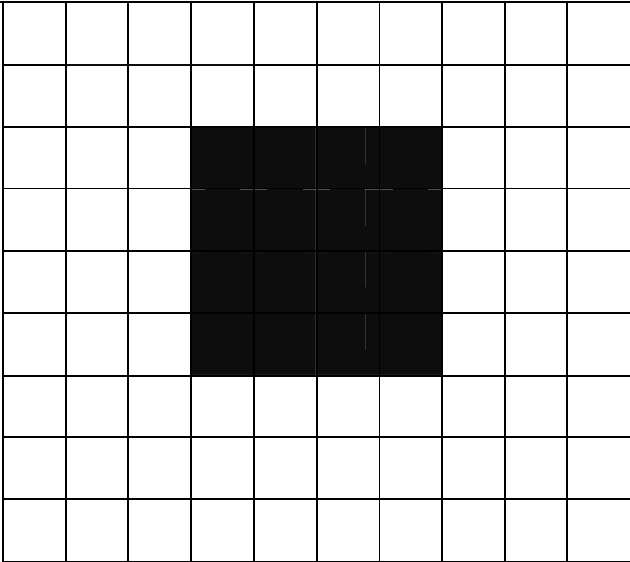
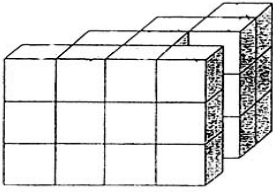
SOLVE PROBLEMS INVOLVING CALCULATING AND CONVERTING BETWEEN APPROPRIATE SI UNITS INCLUDING:

1.	1.1	3 ton = <u>3000</u> kg	1								
	1.2	1 kg 25 g = <u>1,025</u> kg	1								
	1.3	2 l 18 ml = <u>2 018</u> ml	1								
	1.4	<u>4 500</u> ml=4,5 l	1								
	1.5	1 m 84 cm = <u>184</u> cm	1								
2.	2.1	100 g	1								
	2.2	3,3kg = 3300g	1								
	2.3	9kg – 3,3kg = 5,7kg	1								
	2.4	5,67 kg	1								
3.	Number of litre = $\frac{3}{4} \times 12$ = 9		2								
5.	6cm		1								
6.	6.1	1 l needs 250 ml 0,5 l needs 125 ml 1, 5 l needs 3 x 125 ml 1, 5 l needs 375 ml	2								
	6.2	5 x 250 ml = 1 250 ml 5 litres of energy drinks need 1, 25l of concentrate.	2								
7.	1 friend drinks $\frac{1}{2}$ l 45 friends drink $22\frac{1}{2}$ l You must buy 12 two-litre bottles.		2								
8.	2 litres		1								
9.	9.1	4:10 = 2:5	1								
	9.2	10: 4 = 5 : 2	1								
	9.3	$2\frac{1}{2}$ times ($10 \div 4 = 2\frac{1}{2}$)	1								
	9.4	Fraction = $\frac{4}{10} = \frac{2}{5}$	1								
10.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">800 kg</td> <td style="text-align: center;">Elevator with 78 people</td> </tr> <tr> <td style="text-align: center;">35 ton</td> <td style="text-align: center;">Lorry</td> </tr> <tr> <td style="text-align: center;">500g</td> <td style="text-align: center;">Handbag</td> </tr> <tr> <td style="text-align: center;">35 kg</td> <td style="text-align: center;">Wheelbarrow</td> </tr> </table>	800 kg	Elevator with 78 people	35 ton	Lorry	500g	Handbag	35 kg	Wheelbarrow	4
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11.	11.1	S	1
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11.2	R	1
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CALCULATE THE AREA OF RECTANGLES AND SQUARES USING SQUARE GRIDS.

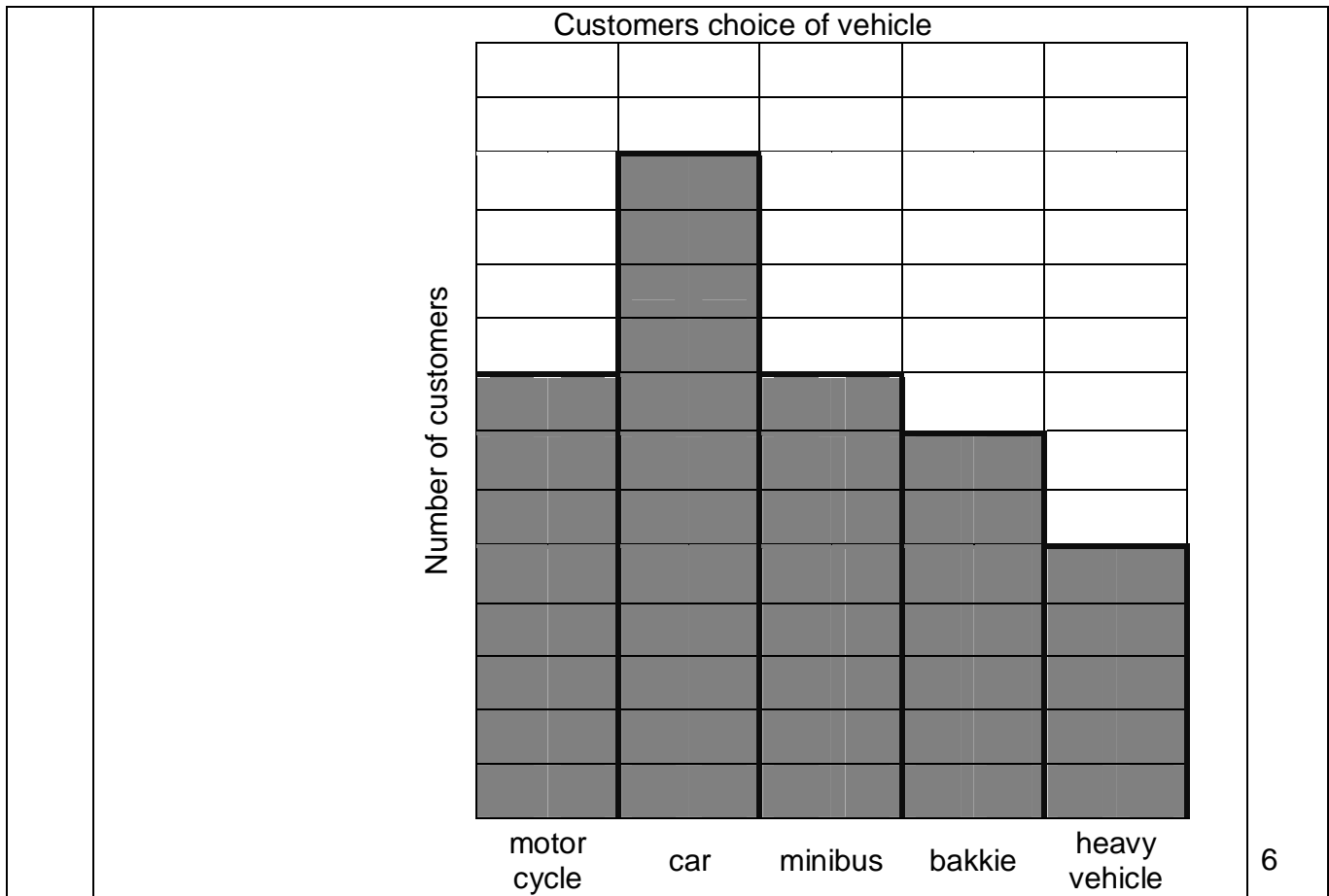
1.	1.1	4 cm	1
	1.2	What is the perimeter of the square? $P = 4\text{cm} + 4\text{cm} + 4\text{cm} + 4\text{cm}$ $= 16\text{ cm}$ or $P = 4 \times 4\text{cm} = 16\text{cm}$	1
	1.3	3 cm	1
	1.4	$P = 3\text{ cm} + 7\text{cm} + 3\text{cm} + 7\text{cm}$ $= 20\text{ cm}$	1
	1.5	Area of the square = 16 cm^2	1
	1.6	Area of the rectangle = 21cm^2	1
2.			2
3.	$PQ = \frac{3}{2} \times 6\text{cm} = 9\text{cm}$		2
4.			
	4.1	27 cubes	
	4.2	27 cm^3	
	4.3	12cm^2	

DATA HANDLING

1.	(3 x 3)	
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2.																																
	<table border="1"> <thead> <tr> <th>Event</th> <th>Impossible</th> <th>Unlikely</th> <th>50% chance</th> <th>Likely</th> <th>Certain</th> </tr> </thead> <tbody> <tr> <td>(a) You will turn 2 years old on your next birthday.</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(b) A coin is tossed to decide who has the kick-off in a soccer match. Bafana Bafana wins the toss at the start of their next match.</td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>(c) A slice of bread with butter and jam spread on one side is dropped on the floor. It lands with the jam side facing up.</td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>(d) A drawing pin is tossed and it lands with the pin facing downwards.</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Event	Impossible	Unlikely	50% chance	Likely	Certain	(a) You will turn 2 years old on your next birthday.	✓					(b) A coin is tossed to decide who has the kick-off in a soccer match. Bafana Bafana wins the toss at the start of their next match.			✓			(c) A slice of bread with butter and jam spread on one side is dropped on the floor. It lands with the jam side facing up.			✓			(d) A drawing pin is tossed and it lands with the pin facing downwards.	✓					4
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3.	We can toss a coin.	1																														
4.	R1 R2 , R1 R5 , R2 R1 , R2 R5 , R5 R1, R5 R2	3																														
5.	$\frac{1}{8}$	1																														
6.	8:4 = 2:1	1																														
7.	<table border="1"> <thead> <tr> <th>Car colour</th> <th>Number of cars</th> <th>Tally marks</th> </tr> </thead> <tbody> <tr> <td>red</td> <td>8</td> <td>### III</td> </tr> <tr> <td>white</td> <td>12</td> <td>##### II</td> </tr> <tr> <td>yellow</td> <td>7</td> <td>###-II</td> </tr> </tbody> </table>	Car colour	Number of cars	Tally marks	red	8	### III	white	12	##### II	yellow	7	###-II	3																		
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8.	Motor cycle	Car	Minibus	Bakkie	Heavy vehicle	
	8	12	8	7	5	



9.	Number of people in the family	Tally marks	Frequency
	1	#####	15
	2	##### /	11
	3	##### /	11
	4	#### /	7
	5	///	3
	6	//	2
	7	/	1

10.	Mean Mark $= (17+23+27+29+30+36) \div 6$ $= 162 \div 6$ $= 27$
11.	72 72 73 74 76 <u>77</u> 78 79 79 79 80 Median=77

12.	Mode = R4, 40
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13.	13.1	$\frac{1}{4}$	
	13.2	$120 \div 8 = 15$	