



**basic education**

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Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

# **ANNUAL NATIONAL ASSESSMENT**

## **GRADE 4**

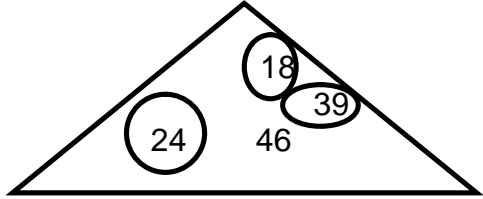
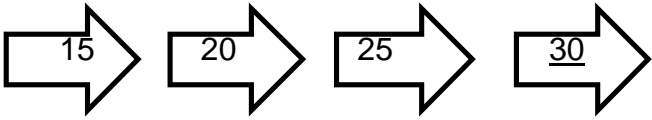
## **MATHEMATICS**

## **SET 1: 2012 EXEMPLAR**

## **MEMORANDUM**



NO.	QUESTION	MARK	LEVEL
1.	a. 3 125 ; 3 150; 3 175	2	E
	b. 6 900; 6 850; 6 800	2	E
2.	a. 2 250; 2 300; 2 325	1	E
	b. 9 140; 9 130; 9 100 and 9 090	1	E
3.	a. 939; 942; 945; 948	2	E
	b. 4 878; 4 876; 4 874; 4 872	2	E
4.	a. <u>519</u> <u>522</u> <u>527</u> <u>532</u>	2	M
	b. 8 222 <u>8 220</u> <u>8 210</u> <u>8 200</u>	2	M
5.	4 582	1	E
6.	a. 4 813	1	E
	b. 6 016	1	E
7.	Five thousand and eighteen	1	M
8.	Six thousand four hundred and thirty-eight or $6\,000 + 400 + 30 + 8$ or $(6 \times 1\,000) + (4 \times 100) + (3 \times 10) + (8 \times 1)$	1	M
9.	8 410, 8 140, 4 810, 4 180	1	M
10.	9 650	1	D
11.	$600 / 6H$	1	E
12.	a. 5 645	1	E
	b. 6 790	1	E
13.	$4\,869 = (4 \times 1\,000) + (8 \times 100) + (6 \times 10) + (9 \times 1)$ or $4\,000 + 800 + 60 + 9$ $= (4 \times 10 \times 10 \times 10) + (8 \times 10 \times 10) + (6 \times 10) + (9 \times 1)$	5	D

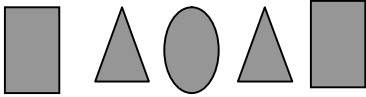
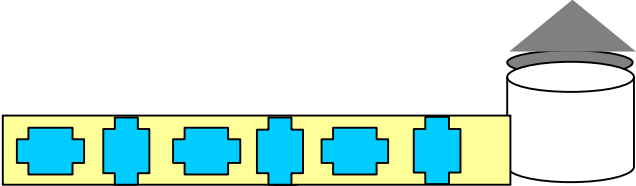
14.	$36 \div 4 = 9$ and $36 \div 9 = 4$	2	D
15.	8	1	M
16.	yes	1	M
17.	a. FALSE b. FALSE	1 1	M M
18.		1	M
19.	No	1	M
20.	8; 16; 24; 32; 40; 48.	1	E
21.	29 (35) 15, 67 (49)	1	E
22.	35	1	E
23.	42; 48; 54	1	M
24.	7	1	E
25.		1	E
<b>Odd and even numbers</b>			
1.	a. 4 108; 4 110 b. 5 985; 5 983	1 1	E

2.		2	M
3.	a. 421 b. 66	1 1	E
4.	643 647 649	1	E
5.	1073; 1 075; 1 077; 1 079; 1 081; 1 083	2	M
<b>Place value of whole numbers</b>			
1.	600	1	E
2.	a. 5 321 b. 2 372	1 1	E
3.	360 (400 – 40)	2	M
4.	a. > b. <	1 1	M
5.	4 202	1	M
<b>Common fractions and decimal fractions</b>			
1.	a. $\frac{1}{10}, \frac{1}{5}, \frac{3}{10}, \frac{4}{10}, \frac{1}{2}, \frac{4}{5}$ b. 2 c. $\frac{1}{4}$ d. Shade 4 parts of sixth strip or 2 parts of thirds strip	2 1 1 1	M E E E
2.	a. $\frac{4}{10}$ or $\frac{2}{5}$ b. 0,5 or $\frac{2}{25}$ c. $\frac{8}{100}$	1 1 1	D





<b>Ratio and rate</b>			
1.	a. 5 : 7 b. 5 : 6 c. 7 : 18	1 1 1	M M M
2.	3 : 4	1	E
3.	10 : 1	1	M
4.	a. 10 b. 80c	1 1	E M
5.	Cost of 7 balls = R42,50 x 7 = R42 x 7 + 50c x 7 = R294 = R3,50 = R297,50	2	M
<b>Grouping and sharing with remainders</b>			
1.	1 car will be left	1	E
2.	10 remainder 1	2	M
3.	a. 12 shells b. 7 shells left over	1 1	E E
4.	9 remainder 2	1	E
<b>Solves problems involving common fraction, including grouping and sharing</b>			
1.	$\frac{1}{10}$ of 30 bananas = 3 bananas	1	E
2.	Number of cakes = $14 \div 4 = 7 \div 2 = 3\frac{1}{2}$	2	M
3.	a. $\frac{1}{5}$ b. $\frac{2}{5}$	1 1	E E
4.	Number of trees = $\frac{2}{3}$ of 24 = $2 \times 8 = 16$	2	M
5.	3 tigers	1	E
6.	a. $\frac{2}{5}$ of R60,00 is $2 \times R12,00 = R24,00$ b. $\frac{3}{5}$	2 1	D M

Problem-solving involving money			
1.	a. R 3,50 b. R4,80	1 1	E M
2.	Cost of 3 toys = R12,34 x 3 = R36,00 + 90c + 12c = R37,02	or $\begin{array}{r} R12,34 \\ \times \quad 3 \\ \hline R37,02 \end{array}$	3 M
3.	a. R67,40 (R40 + R20 + R6 + R1 + 40c) b. R77,20 (R60 + R15 + R1 + R1 + 20c)	2	M
4.	$\begin{array}{r} R\ 38,32 \\ R\ 7,82 \\ +R\ 4,00 \\ \hline R120,14 \end{array}$	2	M
5.	a. Total cost = R86,99 + R25,89 = R112,88	or $\begin{array}{r} R86,99 \\ +R\ 25,89 \\ \hline R112,88 \end{array}$	2 M
	b. Jabu needs R12,88	1	E
Investigate and extend geometric patterns looking for relationships			
1.		1	E
2.	8 matches	1	E
3.	a. 	1	E
	b. South Africa	1	E



<b>Numeric patterns</b>			
1.	a. 16; 22; 29 b. 16; 21;26	1 1	D D
2.	a. Yes b. 560 is a multiple of 20	1 1	E M
3.	$1 + 3 + 5 + 7 + 9 = 25$ $1 + 3 + 5 + 7 + 9 + 11 = 36$	2	D
<b>Relationships</b>			
1.	120 legs	2	D
2.	Number of marbles = $23 + 23 + 12$	2	M
3.	a. Add 5 or + 5 b. Add 10 or + 10 c. Multiply by 3 or x 3	1 1 1	M
4.	Count in multiples of 4	1	E
<b>Number sentences</b>			
1.	Number of chocolates = $R84,00 \div R6,00$	2	D
2.	Open answer	2	D
3.	Add 4 or + 4	1	E
4.	a. +    - b. -    +	4	M
<b>Recognise and name polygons</b>			
1.	A. Hexagon B. Paralellogram C. Pentagon D. Trapezium	4	E

**Sort and compare 3-D objects**

1.

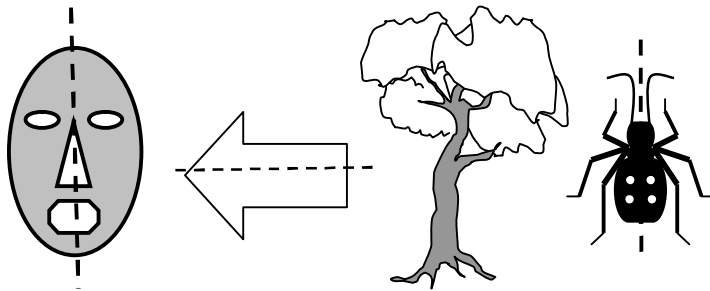
	Name of object	Number of faces	Number of vertices	Number of edges
A	cube	6	8	12
B	cylinder	3	0	0

4

M

**Recognise, draw and describe line (s) of symmetry in 2-D shapes**

1.



3

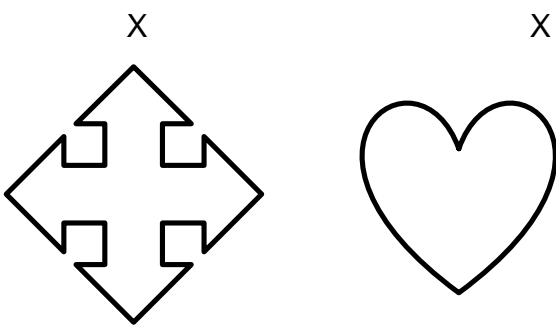
2.

Any 4 capital letters from B E H I K M O S T V W X.

2

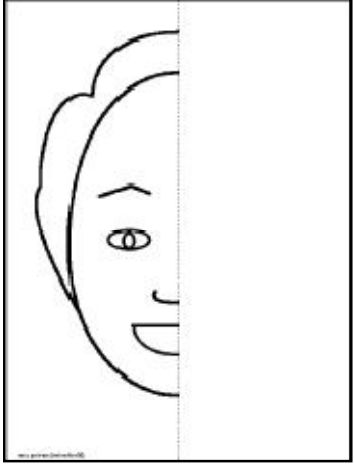
E

3.



2

E

4.		2	
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**Tessellation**

1.	Both shapes can tessellate	1	E
2.	Open answer	2	E
3.	Circles cannot tessellate because of their curved shape	2	M

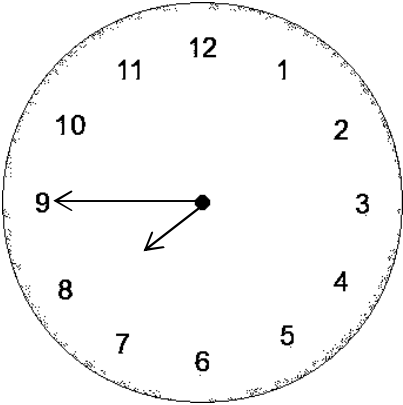
**Identify everyday objects from different views**

1.	1. – Lun 2. – Andre 3. - Vuv	3	M
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**Locate positions of objects on a coded grid**

1.	a. F8 b. A7 c. D2 d. E4	4(1 mark each)	M																									
2.	a. <table border="1" data-bbox="480 1704 842 1928" style="margin-left: 40px;"> <tr> <td></td> <td>A</td> <td>B</td> <td>C</td> <td>D</td> </tr> <tr> <td>1</td> <td></td> <td style="text-align: center;">▲</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td style="text-align: center;">/</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td style="text-align: center;">/</td> <td style="text-align: center;">—</td> <td style="text-align: center;">\</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		A	B	C	D	1		▲			2		/			3	/	—	\		4					2	M
	A	B	C	D																								
1		▲																										
2		/																										
3	/	—	\																									
4																												
	b. A triangle	1	E																									

**Time**

1.		2	D										
2.	<p>10.30 → 12.00 = 1h30m and 12.00 → 3.45 = 3h45min                      Time taken = 5 h 15min</p>	2	D										
3.	<p>a. 100 years                      b. 36 months                      c. 30 days                      d. 10 months</p>	2	M										
4.	<table border="1" data-bbox="263 1361 1042 1615"> <tr> <td data-bbox="263 1361 419 1485">Number of minutes</td> <td data-bbox="419 1361 572 1485">1</td> <td data-bbox="572 1361 727 1485">2</td> <td data-bbox="727 1361 882 1485">5</td> <td data-bbox="882 1361 1042 1485">10</td> </tr> <tr> <td data-bbox="263 1485 419 1615">Number of seconds</td> <td data-bbox="419 1485 572 1615"><b>60</b></td> <td data-bbox="572 1485 727 1615"><b>120</b></td> <td data-bbox="727 1485 882 1615"><b>300</b></td> <td data-bbox="882 1485 1042 1615"><b>600</b></td> </tr> </table>	Number of minutes	1	2	5	10	Number of seconds	<b>60</b>	<b>120</b>	<b>300</b>	<b>600</b>	2	M
Number of minutes	1	2	5	10									
Number of seconds	<b>60</b>	<b>120</b>	<b>300</b>	<b>600</b>									

Measurement			
1.	a. B C D A b. $1\text{ l} - 340\text{ ml} = 660\text{ ml}$ c. $1\text{ l} + 340\text{ ml} + 500\text{ ml} + 750\text{ ml} = 1\text{ l} + 1590\text{ ml} = 2\text{ l} + 590\text{ ml}$	1 1 2	E M M
2.	Kilolitres	1	E
3.	a. $500\text{ ml}$ b. $20\text{ mm}$ c. $0,5\text{ m}$ or $\frac{1}{2}\text{ l}$ d. $1,5\text{ kg}$ or $1\frac{1}{2}\text{ kg}$	2	M
4.	Amount of water used = $2\text{ l} + 50\text{ l} + 32\text{ l} = 84\text{ l}$	2	E
5.	Distance → metres Mass → kilograms Capacity → litres	3	E
6.	A. Perimeter = $(32 + 20 + 31 + 28 + 36) = 147\text{ mm}$ B. Perimeter = $(30 + 30 + 25 + 25)\text{ mm} = 110\text{ mm}$	2 2	M M
7.	open	2	M
8.	20 squares	1	E
9.	a. A b. 15 c. 12	1 1 1	E
10.	6 square units	1	E

<b>Data handling</b>					
1.	<b>Name</b>	<b>Tally</b>	<b>Frequency</b>	4	E
	Amina	IIII	4		
	Lucky	III	3		
	Sam	IIII	5		
	Tammy	II	2		
	a. Sam			1	E M
	b. 14 awards			2	
2.	a. Difference = $14 - 9 = 5$			1	M
	b. Number of learners = $14 + 7 + 1 + 2 + 2 + 9 = 35$			2	M
3.	a. Cars			1	E
	b. Kites			1	E
	c. 45 ( $9 \times 5$ )			1	E
	d. 25 ( $35 - 10$ )				
<b>Probability</b>					
1.	a. unlikely			1	E
	b. likely			1	E
	c. likely			1	E