Noah's Ark Independent Primary School

Subject: Mathematics	Examiner: Rwizi, A
Type: Mid-Year Exam	Moderator: Böhmer, MA
Date: 23 May 2019	Grade: 7
Marks: 100 Marks	Time: 2 hour 30 minutes

Name:

Instructions:

This question paper consists of 4 sections.

Answer ALL the questions in the space provided

Show ALL your calculations where applicable

Write neatly and legibly.

Section A: Number, Operations and Relationship

Question 1

Circle the correct letter

1.1 The highest common multiple of 8 and 16 is? (1)

a. 8 b. 4 c. 16 d. 32

1.2 The value of the underlined digits in the following number: (1)

89 723.346

a. 8000 ; 40 b. $(8 \times 10^4) ; (4 \times 10)$

c. Eight million; four thousandths d. 80 000 ; 0.04

1.3 Calculate value of $3a + 20 = 38$ (1)

a. 18 b. 8 c. 6 d. 12

1.4 $6^2 + 1^3$ = _____ (1)

a. 15 b. 39 c. 37 d. 13

1.5 R 200 increased by 10% is equal to _____ (1)

a. R180 b. R220 c. R210 d. R190

Question 2

2.1 Look at those numbers, list all of the following (5)

1 ; 2 ; 4 ; 8 ; $\sqrt{25}$; 18

a. The only even prime number in the world: _____

b. A square root of 16: _____

c. A multiple of 4: _____

d. A perfect cube:_____

e. A number which is equal to 5: _____

2.2 Arrange these common fractions in descending order.

$\frac{3}{7}$; $\frac{1}{7}$; $\frac{5}{7}$; 1 ; $\frac{4}{7}$; $\frac{2}{7}$ _____ ; _____ ; _____ ; _____ ; _____ ; _____ (2)

2.3 Use the symbols <,>and = to compare these numbers: (2)

a. 4,657 ☐ 4,675

b. $\frac{8}{24}$ ☐ $\frac{1}{3}$

2.4 $\frac{1}{2}$ of $\frac{1}{2}$ of $\frac{1}{2}$ = _____ (1)

2.5 Write down the answers: (1)

a. 1^5=_____

b. 5^3=_____

2.6 Complete the table below: (1)

Mixed number	Improper fraction
$6\frac{2}{5}$	

Question 3

3.1 Calculate the answers for questions a-g.

a) 685 264 + 312 998 (2)	b) 4 632 x 302 (3)
c) $\sqrt[3]{27} + 9 - \sqrt{121}$ (3)	d) $\frac{27}{100} - \frac{2}{10}$ (2)

e) $\frac{3}{4}$ of 40 + 2 x 6 - 42 (3)	f) 263,582 - 54,27 (2)
g) 6,24 x 0.5 + 8^2 (3)	

Question 4

4.1 Kutlwano bought a pair of trouser which cost R120. He received 10% discount. What was the amount paid after the discount? (Clearly show your working.) (3)

4.2 32 grade 7 learners watched a soccer match. The ratio of the number of boys to the number of girls was 5: 3. How many boys were there? (3)

4.3 Remofilwe is an accountant of a mega car dealer in South Africa. Her monthly salary increased from R30 000 to R36 000. Calculate the percentage increase in her monthly salary. (3)

4.4 A truck transports a load of 3 000 kg. $\frac{2}{5}$ of the load consists of fruit and the remainder of vegetables. Calculate:

a. The mass of the fruit on the truck in kgs. (3)

b. The mass of the vegetables on the truck in kgs. (3)

_____ / 50 Marks (Section A)

Section B: Patterns, functions and Algebra

Question 5

5.1 State if the following is an example of a constant or a variable: (2)

a. The number of sides in a square: _____

b. The number of days in the month of February: _____

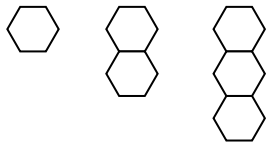
5.2 a. Fill in the following numbers in the following number sequence.

9; 16; 25; _____; 49; _____ (2)

b. Determine the rule to calculate any number: (2)

_____

5.3 Study the following diagram pattern and answer the following questions:



a. Draw pattern number 4 in the space provided. (2)

b. Complete the table below: (2)

Number of polygons	1	2	3	4	6
Number of sides	6	11	16		

5.4 Determine the value of y in the following if: (2)

a. $y = x + 4$ and $x = 2$

b. $y = 2x - 1$ and $x = 3$ (Clearly show your working below)

a.	b.

5.5 Distinguish between a constant and a coefficient. (3)

_____

_____

_____

_____ / 15 Marks (Section B)

Section C: Measurement

Question 6

6.1 1km= _____m (1)

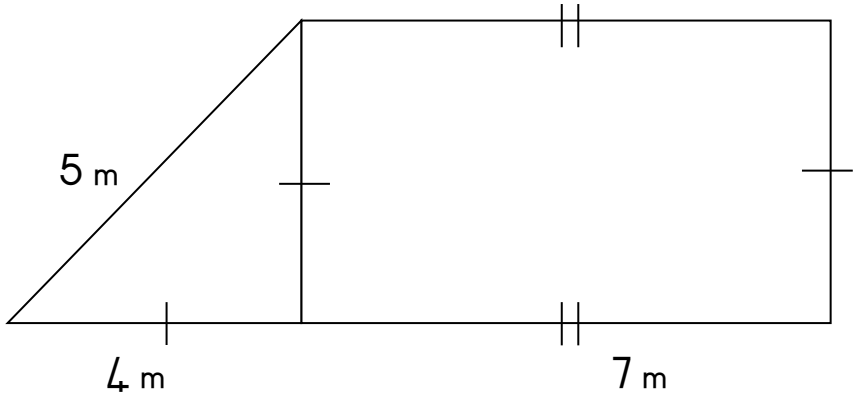
6.2 0.5 cm x 0.5 cm = _____ cm^2 (1)

6.3 Write down a formula to calculate the area of a: (2)

a. rectangle: _____

b. triangle: _____

6.4 This is a plan of room floor.



a. Calculate the perimeter of the triangular shaped part of the room only. (2)

b. i. Calculate the area of the floor. (3)

ii. What will it cost to carpet the area when the carpet costs R 225.35 per m^2 (2)

6.5 The perimeter of a rectangle is 80m. The length of the rectangle is 25m. Calculate the measurements of all the other sides. Clearly show your working. (4)

_____ / 15 Marks (Section C)

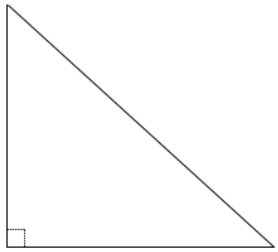
Section D: Space and Shape

Question 7

7.1 Use the word similar or congruent to complete the following sentence. (2)

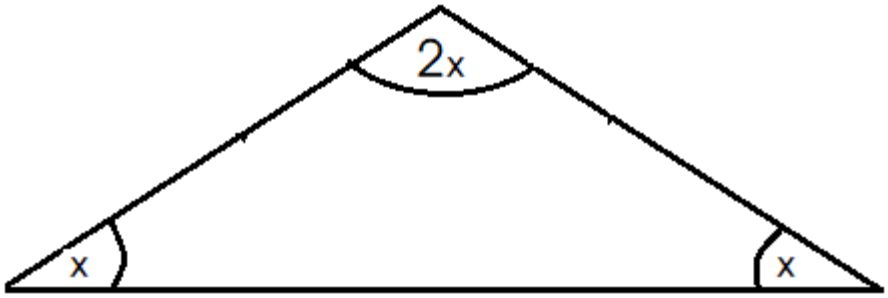
_____ shapes have the same shape, but are not equal in size, and _____ shapes are the same in all respects.

7.2 Identify the following two-dimensional shape: (1)



_____

7.3 Calculate the value of x in the following triangle: (2)



7.4 Distinguish between the following:

a. Semi-circle and diameter: _____

_____

_____ (2)

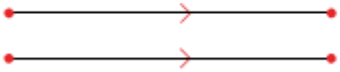
b. Isosceles triangle and equilateral triangle: _____

_____

_____ (2)

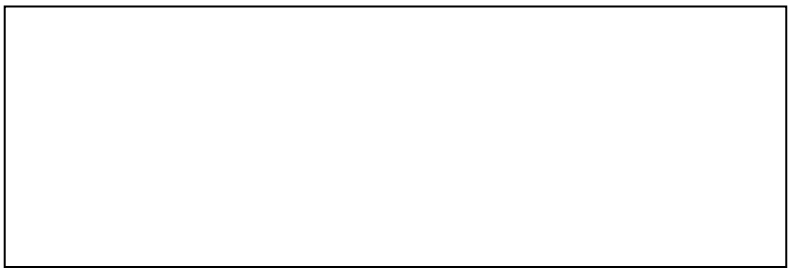
7.5 Describe the following lines. Use these words: (2)

horizontal	vertical	oblique	perpendicular	parallel

a.  _____

b.  _____

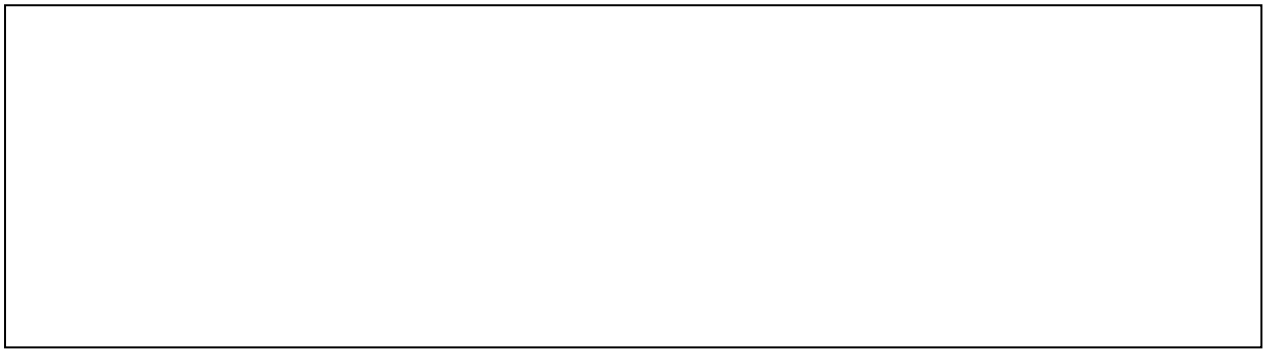
7.6 a. Name the shape below: _____ (1)



b. Draw a diagonal on the shape above. (1)

c. State the shapes that this diagonal divides the shape into: _____. (1)

7.7 Draw a scalene triangle in the space below. Label it ABC. (2)

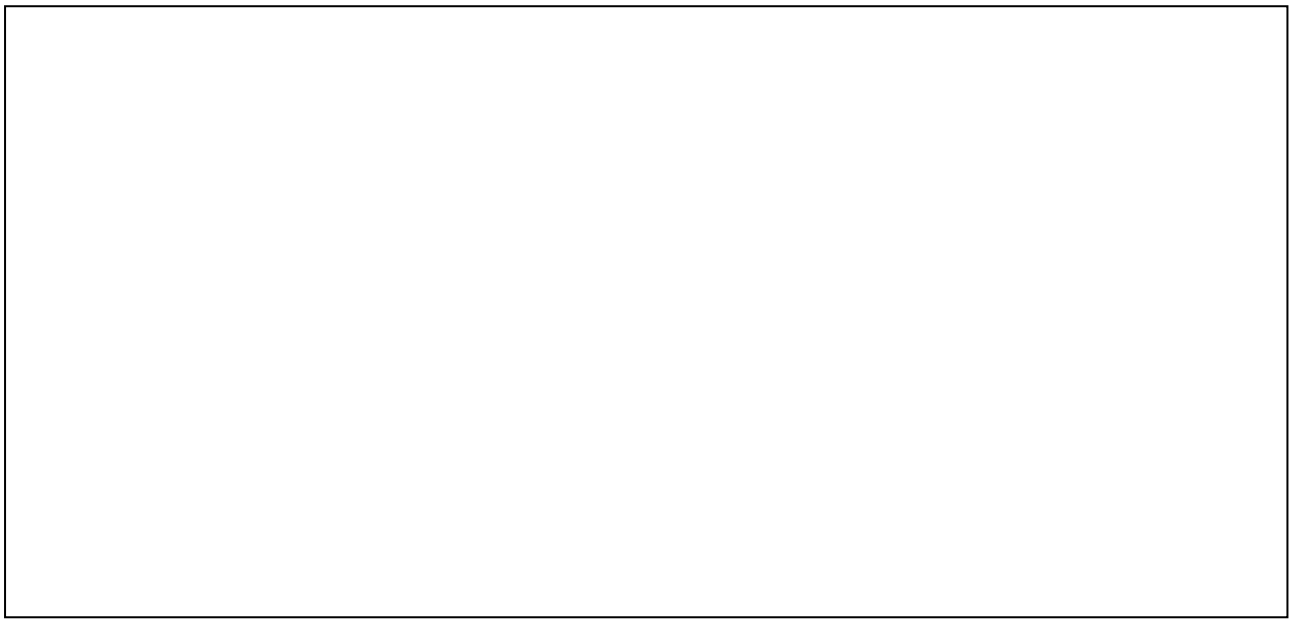


7.8 Describe in your own words the difference between a square and a rhombus: (2)

_____

_____

7.9 Construct a circle with a radius of 25 mm. Clearly mark the centre. (2)



_____ / 20 Marks (Section D)

_____ / 100 Marks T"OTAL