Mathematics

Laerskool Van Dyk Primary   EMIS nr: 700 160 994
Moderator : Mrs E Erwee   District : ES
Educator : Mrs S Jacobsz & Mrs I Peens

Name and surname : _____

Date : _____   Grade 7 . ___

Duration : 1 Hour 45 min   Total : 100

Form of assessment : Exam – Term 4.
Topic : All of the topics in Term 1; 2; 3 and 4.

Marks   **Percentage**

_____   =   _____
  100   %
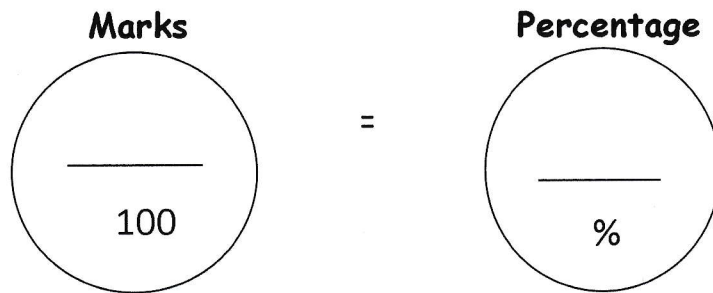
1	2	3	4	5	6	7
0 – 29 %	30 – 39 %	40 - 49 %	50 – 59 %	60 – 69 %	70 – 79 %	80 – 100 %

Instructions:

- This paper consists of 6 pages, answer all the questions in the spaces provided.
- You are allowed to use a calculator and math set.
- Make sure to show all your calculations.
- Write neat and legibly.

Question 1:

1.1. Circle the correct answer for the following questions below:

1.1.1. A prime number between 5 and 16...

    A. 17

    B. 7

    C. 20

    D. 21

1.1.2. The first four multiples of 100 are...

    A. 4, 8, 12, 16

    B. 20, 40, 60, 80

    C. 100, 200, 300, 400

    D. 3, 6, 9, 12

1.1.3. The Place Value of the 8 in 8 463 421 is...

    A. M

    B. Dt

    C. Ft

    D. Gt

1.1.4. Choose the correct symbol for the comparison of these two numbers.

45 761 * 14 531

    A. <

    B. >

    C. =

    D. x
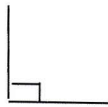
1.1.5. 87 392 rounded off to the nearest 10 is...

   A. 800 000

   B. 87 394

   C. 87 390

   D. 80 000

1.1.6. 14 + 25 = 25 + 14 is an example of the _____ property.

   A. Commutative

   B. 0 and 1

   C. Inverse operation

   D. Block

1.1.7. Look at the angle below. Circle the correct name for this angle.

   A. Straight line angle

   B. Acute angle

   C. Obtuse angle

   D. Right angle

1.1.8. Choose the correct mixed number for this improper fraction $\frac{16}{5}$

   A. 1

   B. $3\frac{1}{5}$

   C. $0\frac{1}{2}$

   D. 4

1.1.9. Simplify the fraction : $\frac{12}{24}$

A. $\frac{1}{2}$

B. $\frac{1}{7}$

C. $\frac{1}{10}$

D. $\frac{24}{1}$

1.1.10. What fraction of the shape is shaded?

A. $\frac{1}{4}$

B. $\frac{1}{5}$

C. $\frac{30}{10}$

D. $\frac{2}{3}$ (10)

1.2. Simplify the two ratio's below:

1.2.1. 48 : 12   _____

1.2.2. 27 : 18 : 72   _____   (2)

Question 2:

2.1. Write the answers of the following exponents:

2.1.1. 3^2 = _____   2.1.2. 5^3 = _____

2.1.3. 7^2 = _____   2.1.4. 4^3 = _____   (4)

2.2. State whether the following statements below are true or false:

2.2.1. b x b x b = b^3 _____

2.2.2. b x b + b = b^3 _____

2.2.3. $\sqrt{100}$ = 50 _____

2.2.4. $\sqrt[3]{125}$ = 5 _____

2.2.5. 3^3 = 27 _____

2.2.6. $2^2 \times 2^2 = 2^4$ _____

2.2.7. $\sqrt[3]{64} + \sqrt{16}$ = 82 _____
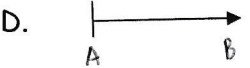
2.2.8. $6^6 \div 6^4 = 6^1$ _____
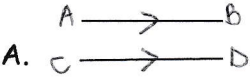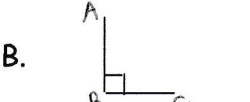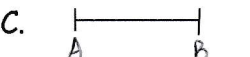
2.2.9. 10^0 = 5 _____

2.2.10. 12^1 = 12 _____ (10)

Question 3:

3.1. Choose the correct answer to match with column A. Write the alphabetical letter in column C.

A	B	C
3.1.1. Line segment	A. A ——→—— B C ——→—— D	3.1.1. _____
3.1.2. Ray	B. A⌐B—C	3.1.2. _____
3.1.3. Perpendicular	C. ├——————┤ A B	3.1.3. _____
3.1.4. Parallel	D. ├————→ A B	3.1.4. _____

(4)

5

3.2. Calculate the perimeter of the Hexagon and the area of the triangle below:

5 m

3 m   10 m

4 m
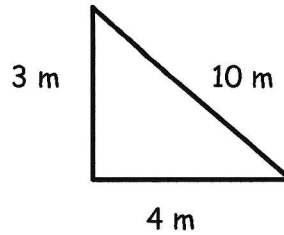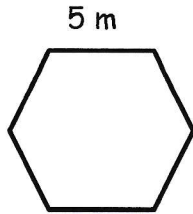
3.2.1. Perimeter of Hexagon:

3.2.2. Area of triangle:

_____

_____
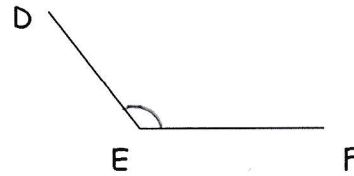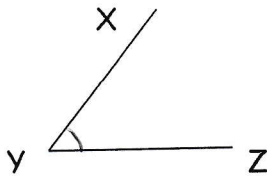
_____   (2)

_____

_____

_____   (3)

3.3. Jenna wants to wrap a present for Lesego. She needs to calculate the surface area of the cube shaped box. Each side of the shape is 7 cm long. Help her calculate the whole box's surface area. (Make sure to use a formula)

7 cm

_____

_____

_____
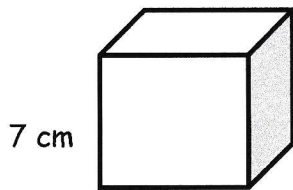
_____   (5)

3.4. Use your protractor to measure the angles given below:

X

Y   Z

D

E   F

3.4.1. XŶZ = _____

3.4.2. DÊF = _____   (2)

Question 4:

4.1. Calculate the following fractions in its simplest form:

4.1.1. $\frac{1}{9} + \frac{5}{9} =$

(2)

4.1.2. $5 - \frac{2}{6} =$

(3)

4.1.3. $\frac{1}{8} \times \frac{4}{11} =$

(1)

4.1.4. $\frac{1}{3} \times \frac{2}{5} \times \frac{3}{4} =$

(1)

4.2. Calculate : 50% of 170

(1)

4.3. Calculate the following decimal fractions:

4.3.1. $9 + 0,3 - 0,06$

(2)

4.3.2. $3,14 \times 2,7$

(3)

4.4. Complete the table below:

Common fraction	Decimal fraction	Percentage	Out of 100
$\frac{1}{2}$		50%	$\frac{50}{100}$
	0,75		$\frac{75}{100}$
$\frac{9}{10}$	0,9	90%	

(4)

4.5. Draw the descriptions of the 2D shape below. Remember the descriptions of the lines and angles.

(3)

Question 5:

5.1. Draw a number line in the space below. Your number line must show numbers -5 to 5.

(1)

5.2. Fill in the additive inverse for the following numbers:

5.2.1. -6 additive inverse : _____

5.2.2. 7 additive inverse : _____

5.2.3. -89 additive inverse : _____   (3)

5.3. Solve the following:

5.3.1. 18 – (-6)

(2)

5.3.2. 14 + (-6)

(2)

5.3.3. -14 – (-10) + 17

(3)

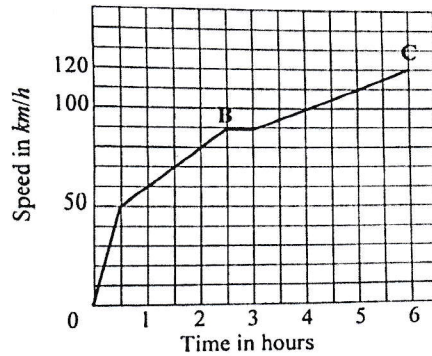## Question 6:

6.1. Use the formula to complete the table below:

$$5 \times x - 2 = y$$

x	1	2	3	
y				33

(4)

Question 7:

The graph on the next page is a speed – time graph of a bus which travelled for a total of 6 hours from bus stop A to bus stop B, where it stopped for a while and then continued to bus stop C. Use the graph to determine the following:

7.1. The distance by the bus in the first 30 minutes.

_____ (1)

7.2. After how much time does the bus reach an average of 110km per hour?

_____ (1)

7.3. For how long did the bus stop at bus stop B?

_____ (1)

7.4. Calculate the distance between bus stop B and bus stop C.

_____

_____

_____   (3)

Question 8:

8.1. Identify the variable and constant of the algebraic expressions below:

Algebraic expression	Variable	Constant
b + 12		
$3b + \frac{1}{4}$		

(4)

8.2. Determine the value of the expression if $x = 4$.

8.2.1. $x^3 - 10$

(2)

8.2.2. $2x + 3$

(2)

8.3. Solve the following number sentences by inspection.

8.3.1. $x - 7 = -19$

(2)

8.3.2. $3x + 10 = 46$

(4)

8.4. Write an equation (number sentence) for each of the following. Use x as the variable.

8.4.1. When I subtract 17 from a certain number the answer is 40.

_____ (1)

8.4.2. A certain number multiplied by two then three is added to get 13.

_____ (1)

8.4.3. A certain number multiplied with itself is 25.

_____ (1)

TOTAL : 100