**NAME OF THE SCHOOL**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Question**  **Number** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **Total** |
| **Total**  **Marks** | **10** | **4** | **11** | **6** | **8** | **10** | **4** | **18** | **10** | **11** | **8** | **100** |
| **Learner**  **Marks** |  |  |  |  |  |  |  |  |  |  |  |  |

ffff gggg

grghhhhhhh

**LOGO**

**GRADE 7 JUNE EXAMINATION 2016**

**MATHEMATICS**

**EXAMINER :**

**TIME : 2 HOURS**

**MODERATOR :**

**TOTAL : 100**

**GRADE 7 :**

**NAME :**

**EDUCATOR :**

**MARKING GRID**

**INSTRUCTIONS:**

* This question paper consists of TWO sections A and B
* This paper consists of **17** pages and **ELEVEN** questions.
* Answer ALL the questions in the spaces provided.
* Clearly show all calculations where necessary.
* Calculators may be used unless stated otherwise.
* If necessary, answers should be rounded off to TWO decimal places.
* Diagrams are not necessarily drawn to scale.
* It is in your own interest to write legibly and to present your work neatly.
* *Answers only will not necessarily be awarded full marks*.

**SECTION A**

**Multiple Choice Questions**

In this Section A , 4 possible answers are given for each question. Only **ONE** of the four options is correct. **Circle the letter** of the correct answer. If more than one letter is circled per question, no marks will be allocated for that question.

**QUESTION 1**

1.1 **The sixth prime number is** (1)

A. 5 B 19 C 13 D 23

1.2 **42 – 23 =** (1) A. 2 B 8 C 0 D 19

1.3 **Twenty million six hundred and nine thousand and fifteen =** (1)

A. 2 690 015 B 20 069 015

C. 20 609 015 D 20 609 150

1.4 **9 4 24** ÷ **12** ÷ **2 =** A. 35 B C 36 D 2 (1)

1.5 **The fraction in its simplest form is** (1)  
  
A. B C D

1.6 **as a decimal fraction is** (1)

A. 3,75 B 0,75 C 7,5 D 3,4

1.7 **If the distance between two lines never changes, they are** (1)

A perpendicular B parallel C intersecting lines D rays

1.8 **An angle that is bigger than 180°, but smaller than 360° is called a** (1)

A reflex angle B right angle

C obtuse angle D acute angle

1.9 **An isosceles triangle has** (1)

A three equal sides. B no equal sides.   
 C not one of the choices D two equal sides.

1.10 **The perimeter of a square is 36 cm. The length of each side is** (1)

A 8 cm B 6 cm C 12 cm D 9 cm

**[10]**

**Section B Show all your calculations**

**QUESTION 2 Calculate the following**

2.1 (2)

2.2 Calculate the following by using the correct order of operations.

Add brackets where necessary.

2.2.1 (2)

**[4]**

**QUESTION 3**

3.1 List all the factors of 36. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (2)

3.2 List the prime factors of 36. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (2)

3.3 Determine the LCM of 4, 9 and 12. (4)

3.4 Express in exponential form: a × a × a = \_\_\_\_\_\_\_\_ (1)

3.5 Find the value of the if and . (2)

**[11]**

**QUESTION 4**

4.1 In a class of 35 learners there are 25 boys and 10 girls. Write down

the **ratio** of boys to girls. (1)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.2 Write down the **fraction** of boys out of the total number of learners above. (1)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.3 Simplify the **fraction** of boys to the total number of learners above. (1)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4.4 The school has 25 boys who can play in the under 13 rugby team.

The coach can take only 20 of them to play an away game.

Calculate the percentage of the boys that can go on the trip. (3)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**[6]**

**QUESTION 5**

5.1 Complete the table (4)

|  |  |  |
| --- | --- | --- |
| **PERCENTAGE** | **DECIMAL FRACTION** | **COMMON FRACTION** |
| 12% | **5.1.1** \_\_\_\_\_\_\_\_\_\_ |  |
| **5.1.2** \_\_\_\_\_\_\_\_\_\_ | 0,6 |  |
| 65% | 0,65 | **5.1.3** \_\_\_\_\_\_\_\_\_\_ |

5.2 Convert the following mixed number to an improper fraction and

the improper fraction to a mixed number.

5.2.1 = \_\_\_\_ (1)

5.2.2 = \_\_\_\_ (1)

5.3. Complete the following equivalent fractions by filling in the missing

numbers.

(2)

**[8]**

**QUESTION 6**

6.1. Round 48,667 to the nearest

6.1.1 whole number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

6.1.2 tenth \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

6.2. A dam is full. During the rain storm it fills by another

6.2.1 How full is the dam after the storm? (2)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6.2.2. Will the dam overflow if it fills by a further Explain your answer. (3)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6.3 Zukhanye bought a tracksuit on sale at which all sports clothes were

marked down by 20%. If the normal price of the tracksuit was R300,

how much did he pay for it? (3)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

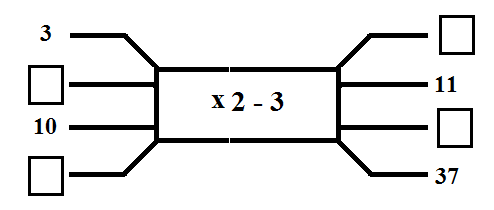
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**[10]**

**QUESTION 7**

7.1 Complete the following process diagram by filling in the missing input

And output values that satisfies the relation in the middle. (4)



**[4]**

**QUESTION 8**

8.1 In the table below the illustrations of items are listed in column A and

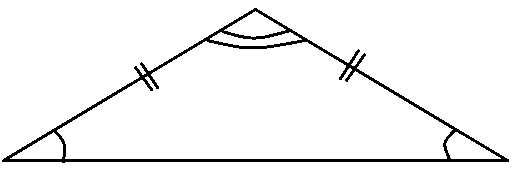
their names in column B. The illustrations do not correspond to the name

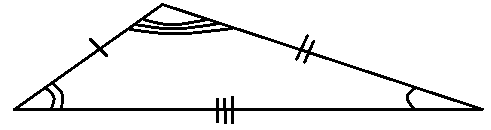
next to it. Choose the correct name and write it opposite the illustration

in column C. (5)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Column A – Illustration | Column B – Incorrect Name | Column C – Correct Name |
| 8.1.1 |  | Line |  |
| 8.1.2 |  | Perpendicular line segments |  |
| 8.1.3 |  | Line segment |  |
| 8.1.4 |  | Parallel lines |  |
| 8.1.5 |  | Ray |  |

8.2. Classify the following triangles according to the length of their sides .

8.2.1 (1)

8.2.2 (1)

8.3 Study the diagram below and answer question that follows.

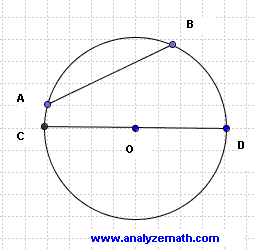


8.3.1 What type of quadrilateral below is EFGH? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

8.3.2 EH = 16 cm and FG = 35 cm. Complete:

EF = \_\_\_\_\_ mm ; GH = \_\_\_\_\_\_ mm. (4)

8.4 O is the centre of the circle below. Name the following line segments



8.4.1 AB \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

8.4.2 CD \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

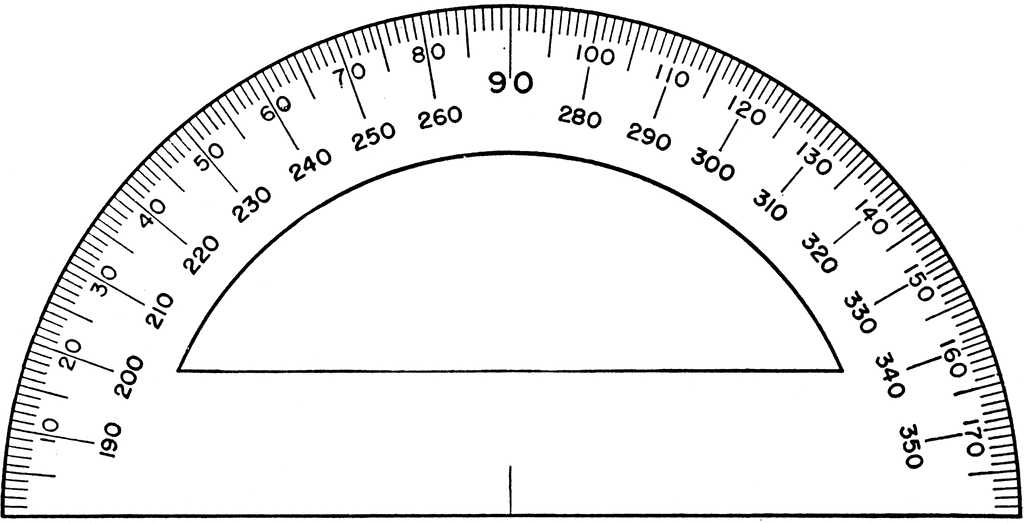
8.4.3 OD \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

8.5 If the diameter of a circle equals 16 cm, calculate the radius. (1)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.6 Write down the size of the angles indicated on the protractor.

*E*



*A*

*B*

*C*

*D*

**[7]**

8.6.1 Angle \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

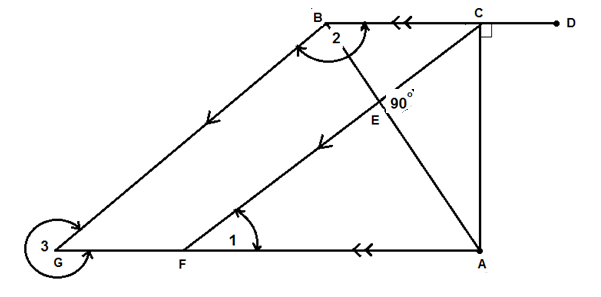
8.6.2 angle \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

**[18]**

**QUESTION 9**

The figure below shows various line segments joining and intersecting each other. The following angles are specially marked.

**; and .**



3

9.1 Write down one pair of line segments which is parallel \_\_\_\_\_\_\_\_\_\_\_\_ (1)

9.2 Write down one pair of lines segments which is perpendicular\_\_\_\_\_\_\_\_\_ (1)

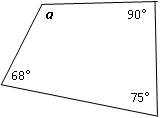
9.3 Classify the angles (acute, right angled, obtuse, straight line,

reflex, revolution).

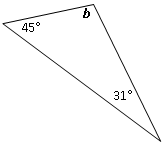
9.3.1 () (1)

9.3.2 ) (1)

9.4 Calculate the size of angle *a*. (3)



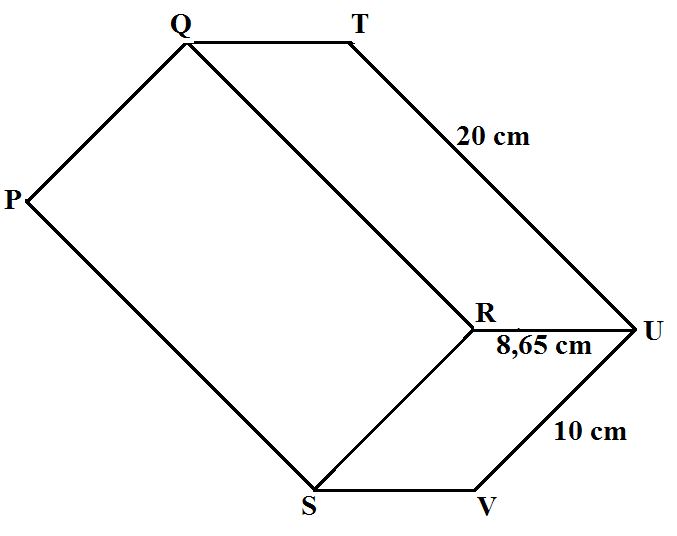
9.5 Calculate the size of angle *b*. (3)



**[10]**

**QUESTION 10**

The rectangular prism (cuboid) on the right has dimensions as indicated

****

10.1. Indicate, for this prism, the number of:

10.1.1 faces \_\_\_\_\_\_\_ (1)

10.1.2 edges \_\_\_\_\_\_\_ (1)

10.1.3 vertices \_\_\_\_\_\_\_ (1)

10.2 Calculate

10.2.1. The perimeter of the face PQRS. (2)

10.2.2 The total surface area of the rectangular prism (cuboid). (4)

10.2.3 The volume of the rectangular prism. (2)

**[11]**

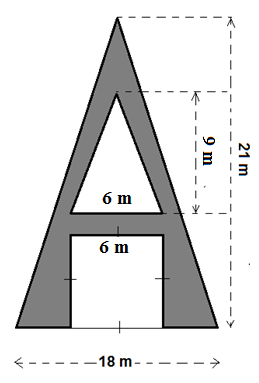
**QUESTION 11**

A marketing company ordered a giant letter A to fit onto the front of the

tall building of their client, Alpha Enterprises. The bottom cut-out where vehicles van drive through, is a square with sides of 6 m. The top

cut-out is a triangle with a base of 6 m and a height of 9 m.

The letter is 21 m tall and 18 m wide at the bottom



11.1 Calculate the area of the square that was cut out at the bottom. (2)

11.2 Calculate the area of the triangle that was cut out at the top. (2)

11.3 Calculate the area of the painted letter A. (4)

**[8]**

**TOTAL : 100 MARKS**