

# SMARTWIZ

## GRADE 6 MATHEMATICS EXAM

**MARKS: 75**

MARKS	

**TIME: 1 hour 30 Minutes**

**SCHOOL** \_\_\_\_\_

**CLASS (e.g. 4A)** \_\_\_\_\_

**SURNAME** \_\_\_\_\_

**NAME** \_\_\_\_\_

### Instructions for Learners:

- >Read all instructions carefully before beginning the exam.
- >Write your name and student number clearly on the answer sheet or booklet.
- >Answer all questions unless otherwise indicated.
- >Show all workings/calculations where applicable.
- >Write clearly and legibly.
- >Use only blue or black ink. \* Do not use correction fluid or tape.
- >No electronic devices (such as calculators, cellphones, etc.) are allowed unless specifically permitted.
- >Raise your hand if you have a question.
- >Do not talk to other learners during the exam.
- >Any form of dishonesty will result in disqualification.

**This exam consists of 7 pages, including the cover page.**

**SECTION A: NUMBERS AND OPERATIONS (15 MARKS)**

Look at the place value table below and answer the questions:

Millions	Hundred Thousands	Ten Thousands	Thousand	Hundreds	Tens	Units
2	3	5	0	9	1	8

1.1 Write the number in digits and in words. (2)

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1.2 What is the value of the 3? (1)

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1.3 Round the number to the nearest 10 000. (1)

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1.4 Add 12 345 to the number. (2)

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1.5 Subtract 18 091 from the number. (2)

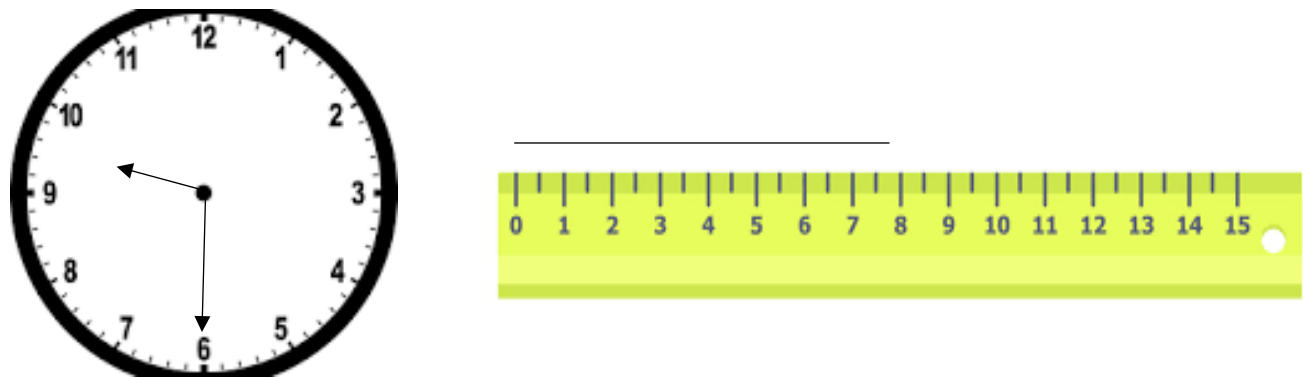
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1.6 Divide the number by 10. Show your answer clearly. (2)

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SECTION B: MEASUREMENT AND TIME (15 MARKS)

Study the clock and ruler diagram.



2.1 What time is shown on the clock? (1)

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2.2 How many minutes until 10 o'clock? (1)

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2.3 Convert 7.8 cm to mm. (1)

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2.4 Convert 2.3 km to metres. (1)

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2.5 A bottle holds 0.75 litres. How many millilitres is that? (1)

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2.6 A class starts at 08:20 and ends at 09:35. How long is the class? (2)

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2.7 How much time has passed between 2:15 p.m. and 5:40 p.m.? (2)

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2.8 Convert:

a) 500 ml = \_\_\_\_ litres

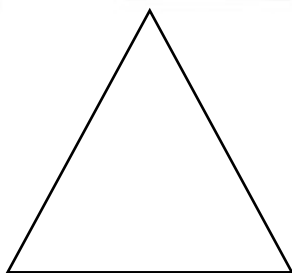
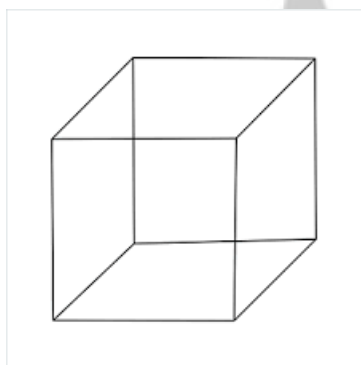
b) 3.5 kg = \_\_\_\_ g (2)

2.9 A triangle has sides 6 cm, 7 cm, and 9 cm. What is its perimeter? (2)

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#### **SECTION D: GEOMETRY (10 MARKS)**

Refer to the image of a cube and a triangle shown.



3.1 How many faces does the cube have? (1)

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3.2 How many edges and vertices does the cube have? (2)

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3.3 What type of triangle has all sides equal? (1)

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3.4 Draw an obtuse angle. Label it clearly. (2)



State the name of the triangle :

a)  $90^\circ$  angle = \_\_\_\_\_ b) Angle greater than  $90^\circ$  = \_\_\_\_\_ (2)

3.6 Name one real object shaped like a sphere. (1)

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### **SECTION E: DATA HANDLING (VISUAL DATA) (13 MARKS)**

Study the bar graph below showing favourite fruit of 30 learners:

Fruit | Number of Learners

-----|-----

Apples | ██████████ (10)

Bananas | █████ (6)

Oranges | ████████ (9)

Grapes | █████ (5)

4.1 How many learners chose bananas? (1)

\_\_\_\_\_

4.2 Which fruit was the most popular? (1)

\_\_\_\_\_

4.3 What is the difference between the number of learners who chose apples and grapes? (2)

\_\_\_\_\_

4.4 How many learners chose apples and oranges combined? (2)

\_\_\_\_\_

4.5 What fraction of the class chose bananas? (1)

\_\_\_\_\_

4.6 Complete the tally table below: (3)

Fruit	Tally	Total
Apples	10	
Bananas	6	
Oranges	9	
Grapes	5	

4.7 Suggest a different way to present the same data. (1)

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**TOTAL: 75 MARKS**

**SECTION A: NUMBERS AND OPERATIONS (15 MARKS)**

1.1 2 350 918 – Two million three hundred fifty thousand nine hundred and eighteen (2)

1.2 300 000 (1)

1.3 2 351 000 (1)

1.4  $2\,350\,918 + 12\,345 = 2\,363\,263$  (2)

1.5  $2\,350\,918 - 18\,091 = 2\,332\,827$  (2)

1.6  $2\,350\,918 \div 10 = 235\,091.8$  (2)

**SECTION B: MEASUREMENT AND TIME (15 MARKS)**

3.1 9:30 (1)

3.2 30 minutes (1)

3.3 78 mm (1)

3.4 2 300 m (1)

3.5 750 ml (1)

3.6 1 hour 15 minutes (2)

3.7 3 hours 25 minutes (2)

3.8 a) 0.5 litres b) 3 500 g (2)



$$3.9 \ 6 + 7 + 9 = 22 \text{ cm (2)}$$

#### **SECTION D: GEOMETRY (10 MARKS)**

4.1 6 faces (1)

4.2 12 edges, 8 vertices (2)

4.3 Equilateral triangle (1)

4.4 Accept any clear obtuse angle drawing ( $>90^\circ$ ) with label (2)

4.5 a)  $90^\circ$  = right angle b)  $>90^\circ$  = obtuse angle (2)

4.6 Ball, globe, orange, etc. (1)

#### **SECTION E: DATA HANDLING (13 MARKS)**

5.1 6 learners (1)

5.2 Apples (1)

5.3  $10 - 5 = 5$  learners (2)

5.4  $10 + 9 = 19$  learners (2)

5.5  $6/30 = 1/5$  (1)

## 5.6 Tally Table:

Apples: |||| |||| (10)

Bananas: |||| || (6)

Oranges: |||| |||| | (9)

Grapes: |||| | (5) (3)

## 5.7 Pie chart or pictograph (1)

**TOTAL: 75 MARKS**

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