MATHEMATICS PRACTICE TEST

Grade: 6

Term: Whole year | **Time:** 90 minutes

Name: _____



ExamGen

Marks obtained: _____ **/ 100**

Percentage: _____ **%**

Every part of this practice test was drafted by AI and checked in advance. Please check this practice test and its memo carefully before use.

1: Numbers, Operations and Relationships (50)

Answer all the questions. Show your work where indicated.

1.1 Round 248 576 off to the nearest 100. **(1 mark)**

1.2 Write TRUE or FALSE next to each statement. **(4 marks)**

29 is a prime number. TRUE / FALSE: _____

33 is a prime number. TRUE / FALSE: _____

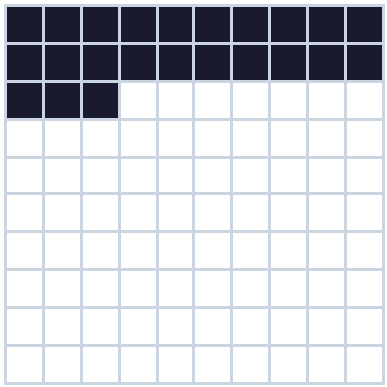
7 is a prime number. TRUE / FALSE: _____

49 is a prime number. TRUE / FALSE: _____

1.3 Fill in <, > or = between the two numbers: **(1 mark)**

89 045 ___ 89 054

1.4 The grid below has 100 equal blocks. Count the shaded blocks to find what percentage of the grid is shaded. **(2 marks)**



1.5 Which number is represented by the following? **(1 mark)**

1 million + 5 hundred thousands + 3 ten thousands + 12 tens + 4 units

1.6 Estimate the answer by rounding first: 312 × 48 **(2 marks)**

1.7 Match the fractions to their decimal equivalents **(3 marks)**

Column A	Column B
A1. $\frac{1}{10}$	**A.** 0,2
A2. $\frac{1}{5}$	**B.** 0,6
A3. $\frac{3}{5}$	**C.** 0,1

A1 = _____ **A2** = _____ **A3** = _____

1.8 Complete the table below. The rate is 12 R/kg. **(5 marks)**

Mass (kg)	Price (R)
1	12
3	
	60
10	
	240
25	

1.9 Calculate: $3\frac{1}{4} + 2\frac{1}{2}$ = ___ **(2 marks)**

1.10 Arrange the following in descending (largest to smallest) order: **(2 marks)**
1,1; $\frac{11}{10}$; $1\frac{1}{2}$; 0,9; $\frac{7}{5}$

1.11 Calculate 25% of 80. **(2 marks)**

1.12 Danie buys 3 rugby kits at R100 each. The shop gives 10% discount on the total. Danie pays with R500. How much change does Danie get back? Show all your steps. **(6 marks)**

1.13 Lerato buys a packet of seeds for R12,50, a watering can for R31,99 and a pair of garden gloves for R27,45. She pays with a R200 note. **(3 marks)**

How much change does she get? Show your working.

1.14 Calculate: $\frac{11}{12} - \frac{6}{12}$ = ___ **(1 mark)**

1.15 A container holds 9,5 ℓ of juice. It is poured into bottles that each hold 600 mℓ. **(2 marks)**

How many FULL bottles can be filled, and how many millilitres of juice are left over?

1.16 If 12 chairs cost R2 808, how much will 2 567 of the same chairs cost? Show your working. **(3 marks)**

1.17 Use the clue board below to calculate: 6 193 ÷ 189. Show all your working. **(6 marks)**

Calculation	Answer
1 × 189	189
2 × 189	378
3 × 189	567
4 × 189	756
5 × 189	945
6 × 189	1 134
7 × 189	1 323
8 × 189	1 512
9 × 189	1 701
10 × 189	1 890
20 × 189	3 780
30 × 189	5 670
40 × 189	7 560
50 × 189	9 450
60 × 189	11 340
70 × 189	13 230
80 × 189	15 120
90 × 189	17 010

1.18 Nadia and Dewald share 36 sweets in the ratio 1 : 2. How many sweets does each one get? Show all your working. **(4 marks)**

2: Patterns, Functions and Algebra (10)

Answer all the questions. Show your work where indicated.

2.1 Given: 6 × 12 = 72. Use this fact to complete: 72 ÷ 12 = ☐ **(1 mark)**

2.2 For which pair of numbers does the rule "multiply the first number by 5 and then add 9 to get the second number" work? **(2 marks)**

A. first number 7, second number 26

B. first number 8, second number 44

C. first number 7, second number 44

D. first number 44, second number 7

Answer: ☐

2.3 Calculate: 5 + 6 × 6 - 3 **(3 marks)**

Show all your working in the correct order of operations.

2.4 Write a number sentence for the following word problem (YOU DO NOT need to work out the answer): **(1 mark)**

The sum of 9 583 and 3 945 is halved.

2.5 A pattern is built from joined triangles, each new one sharing one side with the last: 1 triangle → 3 straws; 2 triangles → 5 straws; 3 triangles → 7 straws. **(3 marks)**

(a) Describe, IN WORDS, the general rule for the number of straws needed for any number of triangles.

(b) Use your rule to find the number of straws needed for 10 triangles.

3: Space and Shape (Geometry) (15)

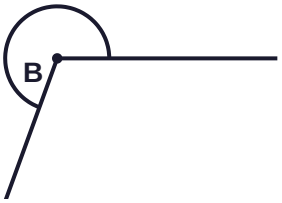
Note: the figures are not necessarily drawn to scale.

Answer all the questions. Show your work where indicated.

3.1 I am a 3-D object. All my faces are flat. Every angle on my faces is a right angle, and all 6 of my faces are equal squares. What am I? **(1 mark)**

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3.2 Study the diagram below. Which option correctly names the angle shown at B? **(2 marks)**



A. straight angle

B. reflex angle

C. acute angle

D. right angle

E. obtuse angle

Answer: ☐

3.3 Look at the angle that has been drawn at B. What type of angle is it? **(1 mark)**



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3.4 Think of a rectangular prism. **(2 marks)**

(a) How many faces does it have?

(b) Which 2-D shapes are its faces, and how many of each shape are there?

3.5 How many vertices does a hexagon have? **(1 mark)**

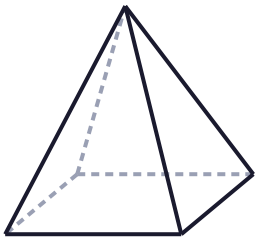
3.6 Look at the angle that has been drawn at B. What type of angle is it? **(1 mark)**



3.7 Complete the table with the correct number of faces, edges and vertices for each 3D shape. **(4 marks)**

3D Shape	Number of Faces	Number of Edges	Number of Vertices
Cube	6	12	
Pentagonal Pyramid			6
Triangular Prism		9	6

3.8 Study the 3D solid that has been drawn (a square pyramid). Complete the table by counting its faces, edges and vertices. **(3 marks)**



Property	Answer
Faces	
Edges	
Vertices	

4: Measurement **(15)**

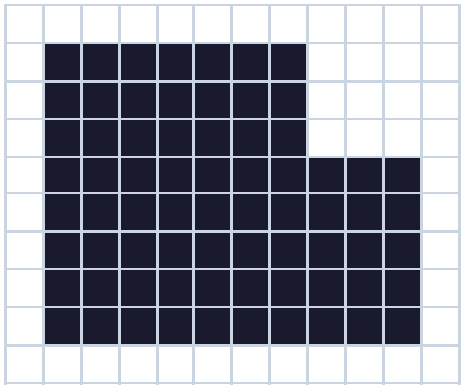
Answer all the questions. Show your work where indicated.

4.1 Convert 1,28 m to cm. **(2 marks)**

4.2 Calculate the volume of a money box that is 10 cm long, 8 cm wide and 6 cm high. Show your working and give your answer in the correct unit. **(3 marks)**

4.3 A learner builds a wall by stacking cube-shaped blocks, three layers high. The bottom layer has 10 blocks. The middle layer has 9 blocks. The top layer has 7 blocks. How many blocks make up the whole wall? **(3 marks)**

4.4 The shaded shape below is drawn on a grid. Each small block is 1 square unit. Count the shaded squares to find the area of the shape. **(3 marks)**



4.5 How many kilograms is 2000 grams? **(1 mark)**

4.6 A plank 358 cm long is cut into 5 EQUAL pieces. Each cut made by the saw wastes 2 cm of wood (turned to sawdust). **(3 marks)**

How long is each piece? Show your working.

5: Data Handling (10)

Answer all the questions. Show your work where indicated.

5.1 Shoe sizes of eight Grade 6 learners: 8; 9; 8; 10; 8; 7; 9; 8. What is the MODE of this data set? **(1 mark)**

5.2 What is the median of the following set of numbers? 33; 38; 29; 36; 31. Show how you ordered them. **(2 marks)**

5.3 Here are the maximum temperatures (°C) over 15 days in January: 21, 26, 31, 36, 23, 28, 33, 38, 25, 30, 35, 22, 27, 32, 37. **(3 marks)**

Group the data into the class intervals below and complete the missing frequency in the table.

Temperature (°C)	Frequency
20–24	
25–29	4
30–34	4
35–39	4

5.4 A school records how many kilograms of paper it collects for recycling each week: Week 1: 12 kg; Week 2: 16 kg; Week 3: 20 kg; Week 4: 24 kg. **(2 marks)**

If this pattern continues, PREDICT the value for Week 5. Give a reason for your prediction.

5.5 You toss a coin once. **(2 marks)**

(a) List all the possible outcomes.

(b) How many possible outcomes are there?

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Total: 100

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