SMARTWIZ

GRADE 5 MATHEMATICS EXAM

MARKS: 50

MARKS	

TIME: 1 hour

SCHOOL_____

CLASS (e.g. 4A) _____

SURNAME_____

NAME_____

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Instructions for Students:

> Read all instructions carefully before beginning the exam.

> Write your name and student ID clearly on the answer sheet/booklet.

> Answer all questions unless otherwise stated.

> Show all your work/calculations where applicable.

> Write clearly and legibly.

> Use blue or black ink only. * Do not use correction fluid/tape.

> No electronic devices (calculators, phones, etc.) are allowed unless explicitly permitted.

> Raise your hand if you have any questions.

> Do not talk to other students during the exam.

> Any form of cheating will result in disqualification.

This test consists of 5 pages, excluding the cover page.

Section A: Multiple Choice Questions (10 marks)

Choose the correct answer for each question. Each question carries 1 mark.

What is 345 + 678?

a) 1023

b) 1003

c) 1025

d) 1033

Which of the following is a prime number?

a) 21

b) 29

c) 35

d) 49

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What is the place value of 7 in the number 7,462?

a) 7,000

b) 700

c) 70

d) 7

How many sides does a hexagon have?

a) 4

b) 5

c) 6

d) 8

Which fraction is equivalent to ½?

a) 2/4

b) 3/4

c) 4/6

d) 5/8

What is 25% of 80?

a) 15

b) 20

c) 25

d) 30

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Which shape has four equal sides and four right angles?

a) Rectangle

b) Square

c) Rhombus

d) Trapezium

If a clock shows the time as 3:30, what is the angle between the hour and minute hands?

a) 90°

b) 105°

c) 120°

d) 150°

What is the perimeter of a rectangle with length 8 cm and width 3 cm?

a) 16 cm

b) 22 cm

c) 24 cm

d) 26 cm

Which of these is an odd number?

a) 14

b) 21

c) 30

d) 40

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Section B: Short Answer Questions (20 marks)

Answer the following questions. Each question is worth 4 marks.

Write the number 7,584 in expanded form.

_____

A box contains 24 apples. If you distribute them equally into 6 baskets, how many apples will each basket have?

_____

Find the area of a rectangle with length 9 cm and width 4 cm.

_____

Convert 3 hours and 45 minutes into minutes.

_____

A triangle has sides of 5 cm, 7 cm, and 9 cm. Is it possible for this triangle to be a right triangle? Explain.

_____

Subtract 1,245 from 2,500.

_____

Write the fraction 3/4 as a decimal.

_____

How many degrees are in a straight line? How about in a full circle?

_____

A shop sells 3 packs of pencils, each containing 12 pencils. How many pencils are there in total?

_____

Round 3,768 to the nearest hundred.

_____

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Section C: Problem-Solving / Word Problems (20 marks)

Answer each question in detail.

(8 marks) A garden is in the shape of a rectangle. Its length is 15 meters, and its width is 10 meters. A path of 1 meter wide is to be built all around the garden. What will be the total area of the garden including the path? (Hint: Find the area of the garden with the path and subtract the garden area.)

(6 marks) A train travels 60 km in 1 hour. How far will it travel in 4 hours? If the train travels the same distance each hour, how long will it take to travel 300 km?

(6 marks) A shopkeeper has 150 candies. He wants to pack them into boxes with 10 candies in each box. How many boxes will he need? Will there be any candies left over? If so, how many?

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TOTAL : 50

Answer Key (Memo)

Section A: Multiple Choice

a) 1023

b) 29

a) 7,000

c) 6

a) 2/4

b) 20 (25% of 80 = 0.25 × 80 = 20)

b) Square

b) 105° (At 3:30, the hour hand is halfway between 3 and 4, and the minute hand is at 6 (30 minutes). The angle is 105°)

b) 22 cm (Perimeter = 2 × (8 + 3) = 2 × 11 = 22)

b) 21

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Section B: Short Answer

7,584 = 7,000 + 500 + 80 + 4

24 apples ÷ 6 baskets = 4 apples per basket

Area = length × width = 9 cm × 4 cm = 36 cm^2

3 hours 45 minutes = (3 × 60) + 45 = 180 + 45 = 225 minutes

No, because the sides do not satisfy the Pythagorean theorem ($5^2 + 7^2 \neq 9^2$).

2,500 - 1,245 = 1,255

3/4 = 0.75

180° in a straight line, 360° in a full circle

3 packs × 12 pencils = 36 pencils

3,768 rounded to the nearest hundred = 3,800

Section C: Problem-Solving / Word Problems

Garden and Path:

Garden length = 15 m, width = 10 m

Path width = 1 m around the garden

New length = 15 + 2 × 1 = 17 m

New width = 10 + 2 × 1 = 12 m

Area of garden including path = 17 × 12 = 204 m²

Area of original garden = 15 × 10 = 150 m²

Total area including path = 204 m²

Area of the path alone = 204 - 150 = 54 m²

Train Travel:

Distance in 4 hours = 60 km/hour × 4 hours = 240 km

To travel 300 km at 60 km/hour: Time = 300 ÷ 60 = 5 hours

Candies and Boxes:

Total candies = 150

Candies per box = 10

Number of boxes needed = 150 ÷ 10 = 15

Leftover candies = 150 mod 10 = 0 (none left over)

End of Exam

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Good luck!

TOTAL : 50

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