



**GAUTENG PROVINCE**  
EDUCATION  
REPUBLIC OF SOUTH AFRICA

**GAUTENG DEPARTMENT OF EDUCATION  
PROVINCIAL EXAMINATION  
NOVEMBER 2020  
GRADE 9**

**MATHEMATICS  
(PAPER 1)**

**NAME OF LEARNER:** \_\_\_\_\_

**GRADE/CLASS:** \_\_\_\_\_

**TIME: 1 hour**

**MARKS: 50**

**8 pages**

**INSTRUCTIONS AND INFORMATION**

1. Answer ALL the questions.
2. A non-programmable calculator may be used unless otherwise stated.
3. Section A consists of FIVE multiple choice questions. You must CIRCLE the letter of the correct answer in the QUESTION PAPER.
4. Answer the questions in the spaces provided.
5. Clearly show all calculations, diagrams and graphs that you have used in determining your answers. Answers ONLY will not necessarily be awarded full marks.
6. Diagrams are not necessarily drawn to scale.
7. If necessary, round-off answers to 2 decimal places, unless otherwise stated.
8. Write neatly and legibly.

**SECTION A**

**QUESTION 1**

FOUR options are provided as possible answers to the following questions.

Circle the letter next to the correct answer in the QUESTION PAPER.

1.1 The given table shows the relationship between  $x$  and  $y$ .

$x$	-2	-1	0	1	2
$y$	-5	-3	-1	1	3

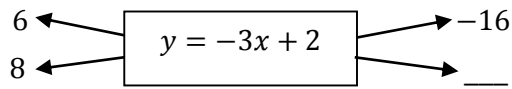
Complete: The rule describing the relationship between  $x$  and  $y$  is ...

- A  $y = 2x + 1$
- B  $y = -2x + 1$
- C  $y = 2x - 1$
- D  $y = -2x - 1$  (1)

1.2 Which one of the following statements is TRUE, if two straight lines are perpendicular?

- A The product of the gradients is  $-1$ .
- B The gradients are equal.
- C The product of the gradients is  $1$ .
- D The sum of the gradients is  $0$ . (1)

1.3 Complete the flow diagram by using the given rule.



- A -22
- B -26
- C 22
- D 26

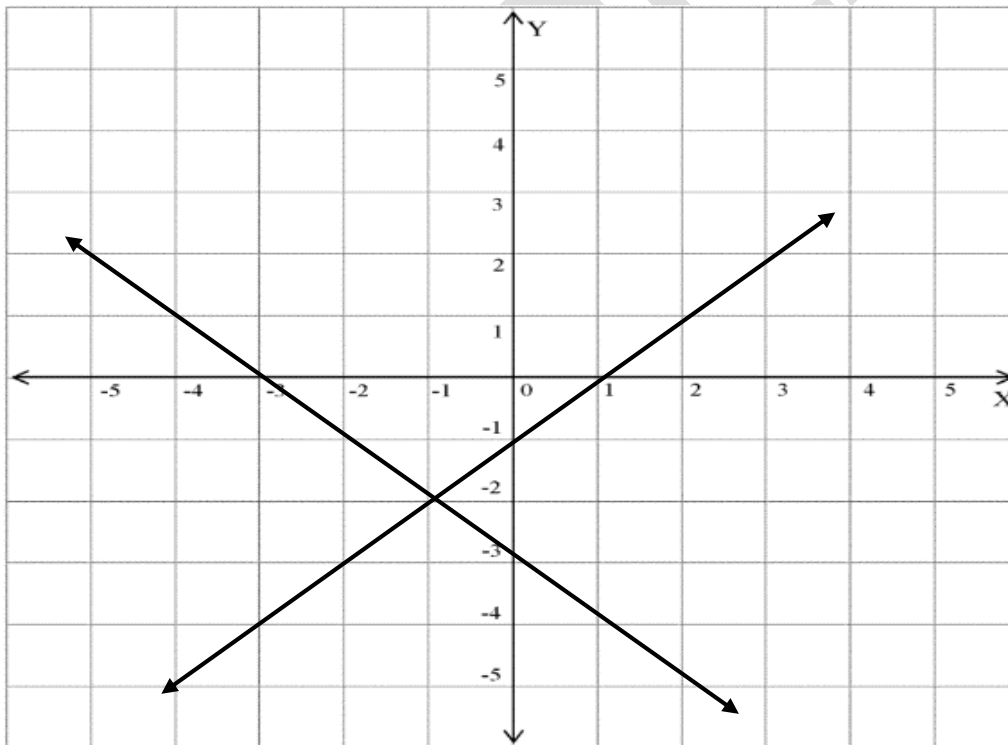
(1)

1.4 Complete: The degree of an expression is given by the ...

- A coefficient.
- B constant.
- C exponent.
- D variable.

(1)

1.5



Complete: The point of intersection of the two graphs is ...

- A (-3; 0).
- B (0; -3).
- C (-2; -1).
- D (-1; -2).

(1)  
[5]

**SECTION B**

**QUESTION 2**

2.1 Expand:

$$(x - 5)(x + 3)$$

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(3)

2.2 Simplify:

$$\frac{ab + a}{ab}$$

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(3)

2.3 Factorise:

2.3.1  $8k^2 - 2$

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(3)

2.3.2  $x^2 - 7x + 12$

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(2)

2.3.3  $\frac{x^2 + 2x}{x^2 - 4}$

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(5)

[16]

**QUESTION 3**

3.1 Solve for the unknown:

3.1.1  $3x - 6 = x - 4$

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(3)

3.1.2  $3^a = 81$

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(2)

3.1.3  $(x - 1)(x + 3) = 0$

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(2)

3.1.4  $4m^2 - 64 = 0$

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(3)

3.2 Cindy bought four tins of tennis balls and emptied them into a basket. The basket had seven balls already. Altogether she now has 27 balls. How many balls were in each tin?

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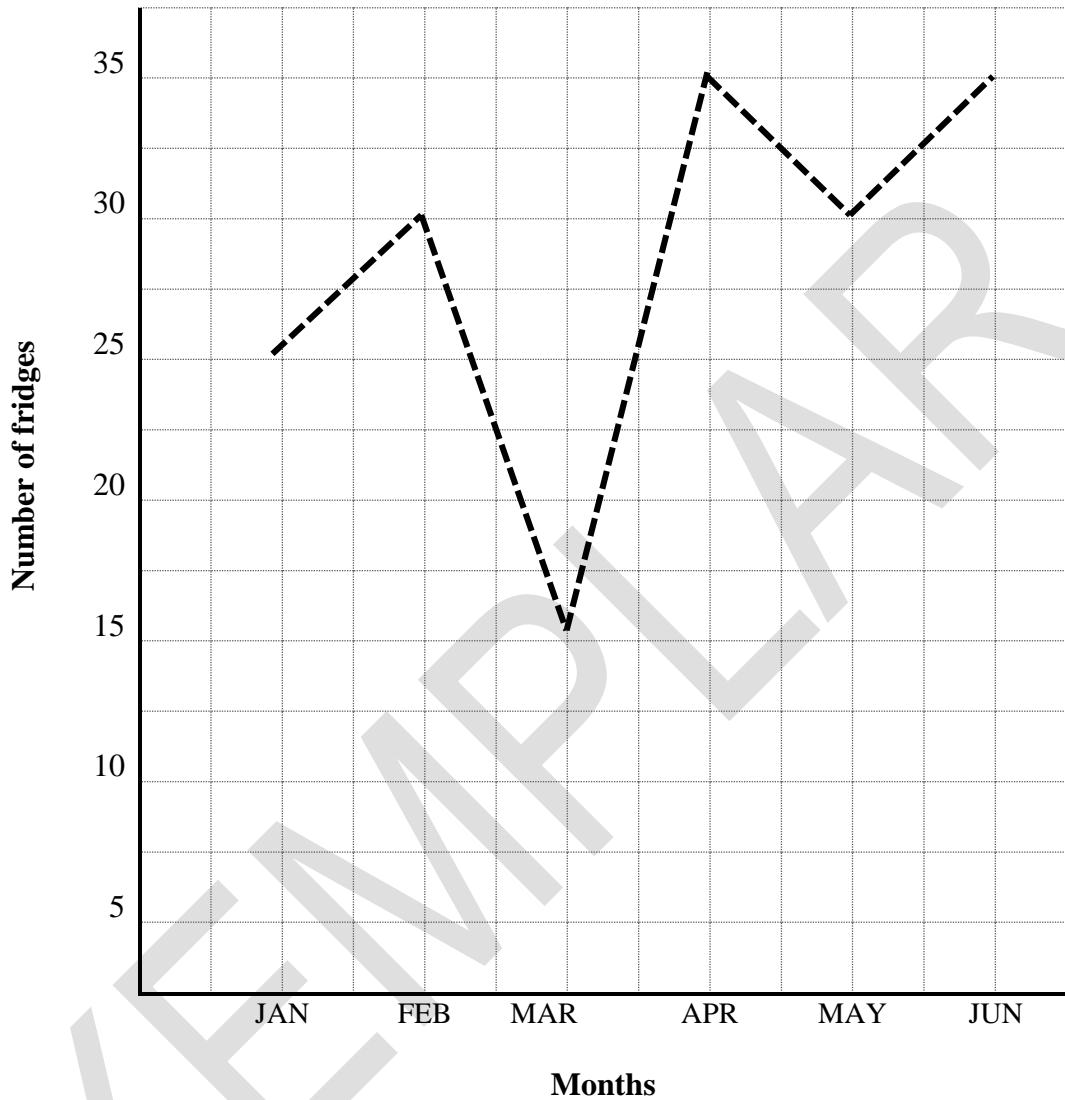
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(4)  
[14]

QUESTION 4

4.1

FRIDGE SALES 2020



The graph above shows the number of fridges sold by a shop between January and June 2020. Refer to the graph to answer the questions.

4.1.1 How many fridges were sold in February?

(1)

4.1.2 Between which months did the sale of fridges decrease?

(2)

4.1.3 How many more fridges were sold in May than in January?

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(2)

4.1.4 Is the data shown in the graph discrete or continuous? Explain your answer.

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(2)

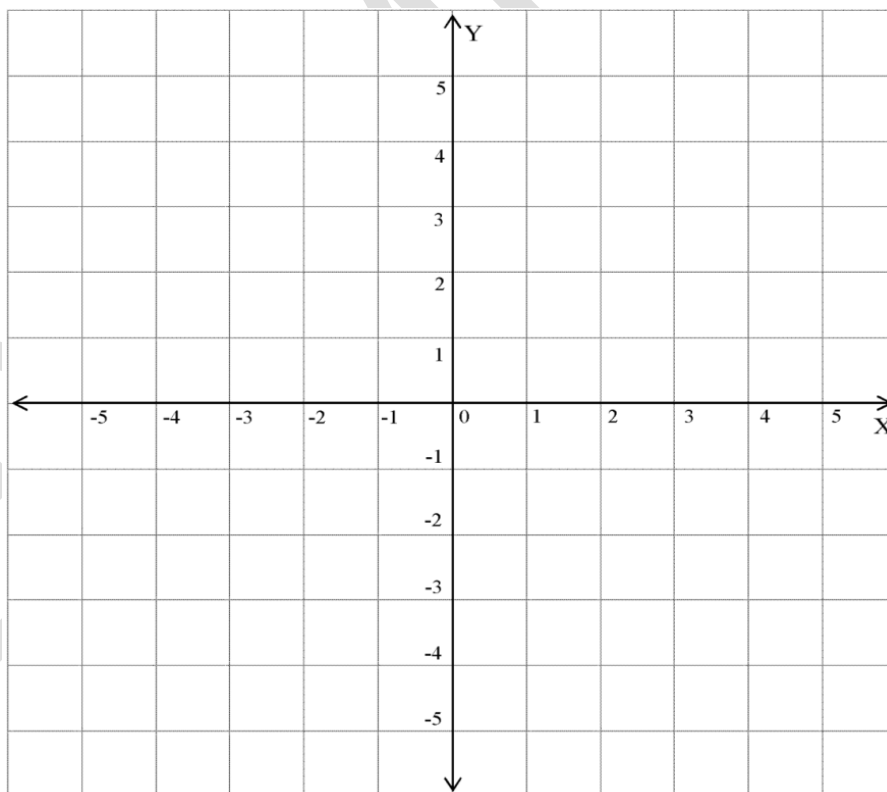
4.2 Given, the equation:  $y = x + 3$ .

4.2.1 Complete the table.

$x$	-2	-1	0	1	2
$y$					

(5)

4.2.2 Use the points from the table in 4.2.1 to draw a graph on the Cartesian plane provided.



(3)  
[15]

**TOTAL: 50**

**END**