



**Subject:** Grade 9 Mathematics

**Topic:** Equations

**Total:** 32 Marks

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Question 1: Text Input**

3 marks

Solve for  $m$  in the equation:

$$\frac{6m+2}{7} + \frac{2m+2}{3} = \frac{2m+16}{5}$$
$$\therefore m = \dots$$

(Give the number only)

**Question 2: Text Input**

3 marks

Solve for  $x$  in the equation:

$$-4\left(x + \frac{1}{2}\right) + 1 = 11$$
$$\therefore x = \dots$$

(Give the value only)

**Question 3: True/False**

2 marks

The equation  $5x - 4 = 9x + 16$  is true when  $x = 5$ .

**TRUE**

**FALSE**

**Question 4: Multiple Choice**

4 marks

If  $2(x - 1)(3x + 1) = (3x + 2)(2x - 1)$ , then  $x = \dots$

- |          |               |
|----------|---------------|
| <b>A</b> | $\frac{3}{2}$ |
| <b>B</b> | $\frac{2}{3}$ |
| <b>C</b> | -2            |
| <b>D</b> | 0             |
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**Question 5: Multiple Choice**

4 marks

The sum of two consecutive even integers is 50.

The numbers will be ...

Let the first integer be  $x$ .

- |          |           |
|----------|-----------|
| <b>A</b> | 22 and 28 |
| <b>B</b> | 24 and 26 |
| <b>C</b> | 20 and 30 |
| <b>D</b> | 18 and 32 |
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**Question 6: True/False**

2 marks

You have 20 biscuits.

$c$  of them are chocolate-flavoured and the rest are vanilla-flavoured.

If the chocolate-flavoured biscuits cost R1,20 each and the vanilla-flavoured biscuits cost R1,05 each, the total cost ( $C$ ) of all the biscuits will be calculated by the formula:

$$C = 1,20c + 1,05c$$

 **TRUE** **FALSE**

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**Question 7: True/False**

3 marks

You have 540 songs on your iPod.

$c$  of them are sample songs that came with your iPod whilst the rest are your own songs that you loaded onto your iPod.

If the price of the sample songs was R5 each, and the songs you purchased were R12 each, the total cost ( $C$ ) of all the songs will be calculated by the formula:

$$C = 5c + 12(540 - c)$$

 TRUE FALSE**Question 8: True/False**

2 marks

Given the equation:

$$\frac{3a}{4} + 5 = \frac{5a}{6} + 2$$

Solving for  $a$  in this equation gives a value of  $a = 36$ .

 TRUE FALSE**Question 9: Text Input**

3 marks

In a board game, 5 points are awarded when a correct answer is given whilst 3 points are deducted when a wrong answer is given.

Two groups of friends are playing this game.

The losing team finds it strange that they lost since they answered more questions than the winning team.

If they answered 20 questions and obtained 28 points, they answered ... questions correctly.

Let the number of questions they answered correctly be  $x$ .

(Give the number only)

**Question 10: Please Fill In The Blanks**

6 marks

The price of a chocolate bar is twice the price of a lollipop.

If you spend R9,00 and get 5 chocolate bars and 8 lollipops, each chocolate bar costs (1) and each lollipop costs (2)

Possible Answers: 50 cents | 70 cents | 60 cents | 100 cents | 90 cents | 40 cents

<b>1</b>	
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<b>2</b>	
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**Total: 32 Marks**