

ALGEBRAIC EQUATIONS

EXAMPLES & ACTIVITIES

GRADE 9

Name and surname: _____

LESSON 1 REVISION

EXAMPLES

1. Determine the value of the following expressions:

1.1 $6 + a$ if $a = 8$

1.2 $4x$ if $x = 3$

1.3 $12 - 3b$ if $b = -3$

1.4 $\frac{y}{3} + 2$ if $y = 12$

1.5 $\frac{6m+5n}{2m}$ as $m = 2$ and $n = -3$

2. Solve for x :

1.1 $x - 5 = 11$

1.2 $2x - 7 = 3$

1.3 $\frac{x}{3} = 7$

1.4 $-7x - 5 = 2x - 13$

1.5 $5x - 1 = -x - 27$

1.6 $13 - x - 8 = 6x - 23$

1.7 $5x + 20 = x + 16$

1.8 $10x + 8 - x = 11x - 7$

3. Solve for x :

3.1 $4(x - 2) = 20$

3.2 $4(2x - 1) = x + 3$

3.3 $3x - (x - 4) = 2 - 5x$

3.4 $-3t(2t - 1) + 3t(1 + 2t) = 3$

3.5 $6 + 3(x - 2) = 4(x + 1)$

3.6 $4(x - 3) = 5 - 5(x - 2)$

3.7 $4(x - 1) + 2(2x - 3) - 2 = 15 - x + 3(3 - x)$

4. Solve for x :

4.1 $\frac{5x}{4} = 2x - 8$

4.2 $3 + \frac{x}{7} = 5$

4.3 $\frac{5(x+1)}{4} - 1 = 2 + \frac{7(x-1)}{4}$

4.4 $\frac{(x+2)}{5} = \frac{x-8}{4}$

5. Solve for x :

5.1 $4^x = 4^2$

5.2 $3 \cdot 8^x = 3$

5.3 $3^x = 81$

5.4 $4^{3x} = 32$

5.5 $2^x + 1 = 9$

5.6 $2^x \cdot 2^{x+2} = 16$

6. Create an equation for each of the following questions, and then solve the equation:

6.1 Determine a number, so that, when you multiply it by 4 and then subtract 8, you get an answer of 32. **(Let the number be y)**

6.2 I think of a number and add 5 to it. I then multiply this number by 2 and then subtract 3. I find that the answer is 3 times the number I first thought of. **(Let the number be y)**

Exercise 1

1. Determine the value of the following expressions:

1.1 $6x$ if $x = -3$

1.2 $\frac{4x-y}{xy}$ if $x = 2$ and $y = -2$

1.3 $2a + 3b - c$ if $a = 3$, $b = -4$ and $c = -1$

1.4 $\sqrt{b - 3a}$ if $a = -2$ and $b = 3$

1.5 $\frac{1}{2}p - \frac{3}{4}q$ if $p = -4$ and $q = -3$

2. Solve the following equations:

2.1 $y - 7 = 4$

2.2 $-3x = 9$

2.3 $\frac{2p}{3} = 4$

2.4 $-3x + 4 = -2$

2.5 $5q - 2 = 6 + 4q$

2.6 $-6x - 5 = -3x - 10$

2.7 $\frac{5-2x}{3} = 4x$

2.8 $3(1 + 2x) = x + 8$

2.9 $2k - 3(k - 1) = 15 - 4k$

2.10 $\frac{1}{2}(2 + 4x) = 7(x - 1) - 2$

2.11 $2 \cdot 2^x = 8$

2.12 $\frac{1}{3} \cdot 3^{2x-3} = 1$

3. Determine the following:

- 3.1 If the result of the sum of a certain number and 4 is multiplied by 3, the answer is the same as multiplying the number by 9. Determine the number.
- 3.2 The length of a rectangle is 5 cm longer than its width. If the circumference is 38 cm, calculate the length and width of the rectangle.
- 3.3 The sum of three consecutive odd numbers equals 39. Determine the three numbers.
- 3.4 A father is five times his daughter's age. In five years, he will be three times his daughter's age. Find both their ages.

LESSON 2

EXAMPLES

1. Solve the following equations:

1.1 $\frac{a}{2} = \frac{a}{5} + 3$

1.4 $\frac{d+3}{2} - \frac{d-2}{3} = d - 2$

1.2 $\frac{b}{4} - \frac{2b}{3} = 5$

1.5 $3 + \frac{10}{e} = \frac{2(e+5)}{e}$

1.3 $\frac{3c}{10} - \frac{2c}{5} = \frac{c}{2} + 3$

Exercise 2

1. Solve the following equations:

1.1 $\frac{3x-1}{2} = \frac{4x}{3}$

1.4 $\frac{4x+1}{4} + \frac{3x+2}{2} = \frac{3x}{2}$

1.2 $\frac{5x}{2} = \frac{3x}{4} - 1\frac{1}{2}$

1.5 $\frac{m+2}{4} - \frac{m-6}{3} = \frac{1}{2}$

1.3 $\frac{3x}{2} + \frac{2}{3} = x - \frac{5}{6}$

1.6 $\frac{2(x+3)}{5} - \frac{x+7}{3} = \frac{3x-8}{2}$

LESSON 3

EXAMPLES

1. Solve the following equations:

1.1 $x(x-2) = 0$

1.5 $0 = 3(x-2)(x+2)$

1.2 $x(x+5) = 0$

1.6 $0 = x(2-x)$

1.3 $2x(3x-12) = 0$

1.7 $(7-9x)(1-5x) = 0$

1.4 $(x-1)(x+3) = 0$

1.8 $x^2(2x-14) = 0$

2. Solve the following equations:

2.1 $2x - 4 = 0$

2.2 $x^2 + 3x = 0$

2.3 $x^2 + 2x^2 = 6x$

2.4 $\frac{6x}{3} + x = -4x^2$

2.5 $x(x - 4) + 2(x - 4) = 0$

2.6 $m(2m - 8) + 2(8 - 2m) = 0$

Exercise 3

1. Solve the following equations:

1.1 $5x(x - 2) = 0$

1.2 $3(2x - 4) = 0$

1.3 $2 - x(x - 1) = 2$

1.4 $(x - 1)(x + 3) = 0$

1.5 $2(x + 2)(3x - 9) = 0$

1.6 $\frac{1}{2}(2x - 3)(x - 4) + 1 = 1$

2. Solve the following equations:

2.1 $2x = 12$

2.2 $y^3 + 5y^2 = 0$

2.3 $3x^2 - x^2 = 8x$

2.4 $\frac{2x}{3} + x = -10x^2$

2.5 $3(2x + 6) - 3x(2x + 6) = 0$

2.6 $2(a - 2) + 3a(2 - a) = 0$

LESSON 4

EXAMPLES

1. Solve the following equations:

1.1 $x^2 + 5x + 6 = 0$

1.2 $x^2 - 2x - 8 = 0$

1.3 $-2x^2 + 14x - 24 = 0$

1.4 $3x^2 - 3x = 18$

1.5 $x(x + 5) = 6$

1.6 $(x - 6)(x - 4) = 24$

Exercise 4

1. Solve the following equations:

1.1 $x^2 - 5x + 6 = 0$

1.2 $x^2 - 4x - 12 = 0$

1.3 $-x^2 + 12x + 28 = 0$

1.4 $a^2 = 11a - 26$

1.5 $3y^2 - 3y = 18$

1.6 $2x^2 = 16x - 32$

1.7 $x^3 + 2x^2 - 8x = 0$

1.8 $(x - 4)(x - 6) = 24$

1.9 $(x - 3)^2 = 9$

1.10 $2(x - 2)^2 - 72 = 0$

LESSON 5

EXAMPLES

1. Solve the following equations:

1.1 $x^2 - 4 = 0$

1.2 $x^2 = 81$

1.3 $4x^2 = 9$

1.4 $2x^3 = 8x$

1.5 $4x^2(x - 3) + 9(3 - x) = 0$

Exercise 5

1. Solve the following equations:

1.1 $4x^2 - 16 = 0$

1.2 $25a^2 - 16 = 0$

1.3 $2m^2 = 72$

1.4 $-x^2 = -16$

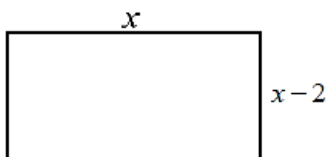
1.5 $-3n^3 + 3n = 0$

1.6 $9x^3 = 81x$

LESSON 6

EXAMPLES

1. A father is 16 years older than his son. Six years ago, he was three times his son's age. Now calculate the ages of both.
2. A rectangle has an area of 8 m^2 . Its width is two meters less than its length. Find the dimensions of the rectangle.



Exercise 6

1. Solve the following equations:

- 1.1 If you triple a certain number and subtract 8, you get the same answer as when you add 10 to the number. Determine the number.

- 1.2 A mother is now nine times her son's age. In four years, she will be five times her son's age. What are their current ages?

- 1.3 The length of a rectangle is $(x+3)$ meters and the width is $(x-2)$ meters. If the area is 66 m^2 , calculate the value of x .

- 1.4 The length of a rectangle is 3 meters longer than the width.
(1) If the perimeter is 26 meters, what is the length and width?
(2) If the area is 70 m^2 , what is the length and width?

LESSON 7

EXAMPLES

1. Given $y = 2x^2 + 4x + 3$, calculate y if $x = -2$
2. Given $y = x^2 - 3x + 2$, calculate y if:
 - 2.1 $x = 0$
 - 2.2 $x = 3$
 - 2.3 $x = -1$

Exercise 7

1. Solve the following equations:
 - 1.1 If $y = x^2 - 4x$, calculate the value of:
 - (1) y if $x = 5$
 - (2) y if $x = -6$
 - 1.2 If $y = (x - 1)^2 + 2$, calculate the value of :
 - (1) y if $x = 6$
 - (2) y if $x = -3$
 - 1.3 The formula for calculating the total surface area of a cylinder is $S = 2\pi r^2 + 2\pi rh$. Calculate the surface area if $r = 3\text{cm}$, $h = 10\text{cm}$ and $\pi = 3,141$.
 - 1.4 A flea jumps up from the ground, reaches a maximum height, and then falls back to the ground again. The equation of its motion is given by the formula $D = 20t - t^2$ where t the time in seconds is and D is the distance of the flea above the ground in centimeters.
 - (1) How far from the ground is the flea after 2 seconds?
 - (2) After how many seconds will the flea be 36 cm off the ground?
 - (3) After how many seconds will the flea be back on the ground?

LESSON 8

EXAMPLES

1. Study the equation: $y = 5x + 2$

1.1 How many variables does the equation have? (Name them.)

1.2 Is it possible to solve this equation?

1.3 Copy and complete the table:

x	12	10	20	5	6	-5	-10
$5x + 2$							

2. Complete the table by writing the ordered pairs in parentheses below the table.

$$y = x^2 + 2$$

x	-12	-7	-2	3	
y					102

Exercise 8

1. Complete the following tables and write down the ordered pairs:

1.1 $y = -4x + 8$

x		-1		2	
y	16		8		12

1.2 $y = x^2 - 6$

x		-1	0		4
y	-2			3	

1.3 $y = x(x + 1)$

x	-3		0	2	
y		0			20

LESSON 9 CONSOLIDATION

Oefening 9

1. Solve the following equations :

1.1 $6x + 3 = 27$

1.2 $35 + x = 75$

1.3 $12x - 10 = 6x + 32$

1.4 $0,3x - 2,1 = 0,7 - 0,4x$

1.5 $x + 5 = -2(x - 1)$

1.6 $2(x + 4) + 9 = 15$

1.12 $x^2 - 49 = 0$

1.13 $x^2 = 16$

1.14 $4a^2 = 9$

1.15 $64a^2 - 25 = 0$

1.20 $x^2 - 3x = 0$

1.21 $x^2 + 2x^2 = 6x$

1.22 $x^2 + 9x + 14 = 0$

1.23 $x^2 + 3x = 18$

1.24 $x^2 - 18x = -17$

1.30 $3^{x-2} = 3^{-5}$

1.31 $2^{2x+2} = 4^{3x}$

1.32 $3^{3x} = 3^6$

1.33 $2^x = 2$

1.34 $2^{2x+2} = 16$

1.35 $2^{x+1} = 16$

1.36 $7^x = 1$

1.37 $2^{x+1} = 1$

1.38 $2^x - 4 \times \sqrt{16} = 0$

1.7 $4(3 - x) = 9(x - 3)$

1.8 $4(2m - 5) = 2(m + 1)$

1.9 $5(x - 2) = 7(2 - x)$

1.10 $4(x - 3) = 9(3 - x)$

1.11 $3(x - 1) - 4x = 5 - 2(x + 1)$

1.16 $-4\left(\frac{1}{2}x - 1\right)(4x + 1) = 0$

1.17 $(x - 1)(5x + 4) = 0$

1.18 $(x - 3)(x - 2) = 0$

1.19 $(x - 4)(x + 8) = 0$

1.25 $x^2 + 30 = 11x$

1.26 $x^2 = 13x + 30$

1.27 $2x^2 - 6x - 8 = 0$

1.28 $3x^2 - 18x = 21$

1.29 $(x - 3)(x - 2) = x - 2$

1.39 $3^{2x-1} = \frac{1}{3}$

1.40 $9^{x+1} = \frac{1}{27}$

1.41 $64^x - 4 = 0$

1.42 $2^{x+5} = 64$

1.43 $3^{n+2} = 27$

1.44 $3^x + 1 = 28$

1.45 $x^{x+1} \cdot 2^4 = 128$

1.46 $\frac{9x+3}{2} = 15$

1.47 $\frac{-2x}{3} = 12$

1.48 $x - \frac{(x-2)}{3} = 2$

1.49 $3x + \frac{2x-5}{3} = 1$

1.50 $\frac{2x}{3} - 2 = 12$

1.51 $\frac{4y+3}{5} = 5y - 12$

1.52 $\frac{6x}{3} - x = x^2 - 2$

1.53 $\frac{5x-7}{3} - \frac{7x-10}{5} = 1$

1.54 $\frac{x-11}{2} - 5 = \frac{x+2}{6}$

1.55 $\frac{3y-3}{2} + \frac{5}{2} = \frac{5y}{3}$

1.56 $\frac{2x-5}{5} + \frac{x+7}{2} = 8$

2. Determine an equation for the following and solve the equation :

- 2.1 Rental company A has an admin fee of R115,00 and charges R210 per day for car rental. Rental company B has an admin fee of R255,00 and charges R190 per day for a car.

After how many days will the cost of the rent be equal?

- 2.2 Six is subtracted from three times a number and the answer is 9. Find the number.

- 2.3 Cindy bought four cans of tennis balls and threw them out in a basket. The basket already had seven balls. In total, she now has 27 balls. How many balls were in each can?

- 2.4 The perimeter of a square is given as $P = 4(x - 1)$ and $P = 16$ units. What is the value of x ?

- 2.5 The square of a number added to twice the number equals three. Determine the possible values of the number.

- 2.6 Ben and Thabo decide to do some calculations with a certain number. Ben multiplies the number by 5 and adds 12. Thabo gets the same answer as Ben where he multiplies the number by 9 and subtracts 16. What is the number they worked with?

3. Determine the value.

- 3.1 Solve for p if $\frac{p}{3} = -2$

- 3.2 What is the value of g , if $\frac{g}{7} = -3$?

- 3.3 If $b = -2$, determine the value of $-2b^3$

- 3.4 If $y = 2x^2 + 4x - 3$ determine y if $x = -2$

- 3.5 If $\frac{a+3}{b} = \frac{5}{6}$ determine b if $a = 5$

- 3.6 $\frac{a+6}{b} = \frac{1}{2}$ determine b if $a = -2$

- 3.7 Determine the value of $(x^3 - 3x + 9 - x^2)^2$ if $x = -3$

- 3.8 Determine the value of $x^2 - 2xy - 4$ if $x = 1$ and $y = -2$

- 3.9 If $x + y = 5$ what is the value of $3x + 3y$?

4. Complete the tables below for x and/or y values. Write the outcome as ordered pairs.

4.1 $y = 2x^2$

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

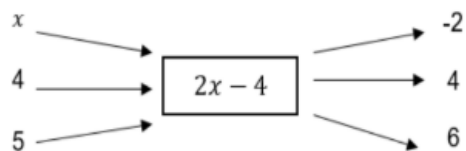
4.2 $y = -x^2 + 5$

x		-1	0		4
y	1			-11	

4.3 $y = 2^x + 2$

x	0	1	2	3	
y					18

4.3 What is the value of x ?



LESSON 10

GEC QUESTIONS

2022

24. $x - 5 = -7$

What is the value of x ?

A	2	B	12	C	-2	D	-14
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25. $\frac{(3x+1)}{2} = 5$

What is the value of x ?

A	-4	B	4	C	-3	D	3
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26. $x(x - 4) = 0$

What is the solution of the equation?

A	$x = -4$ or $x = 0$	B	$x = 0$ or $x = 4$	C	$x = 0$	D	$x = -4$
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27. $6^{x-1} = 36$

What is the value of x ?

A	2	B	3	C	-1	D	-3
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28. $y = 12x - 18$ and $y = -6$

What is the value of x ?

A	-1	B	1	C	2	D	-2
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29.

x	-1	0	1	2	3	4
y	a	2	3	6	11	18

What is the value of a ?

A	3	B	1	C	-2	D	-3
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30. $18x^2 - 24x = 0$

What is the solution of the equation?

A	$x = 0$ or $x = \frac{3}{4}$	B	$x = 0$ or $x = -\frac{4}{3}$	C	$x = 0$ or $x = -\frac{3}{4}$	D	$x = 0$ or $x = \frac{4}{3}$
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31. $4x^2 - 4x = 48$

What is the solution of the equation?

A	$x = -2$ or $x = 6$	B	$x = 3$ or $x = -4$	C	$x = 2$ or $x = -6$	D	$x = -3$ or $x = 4$
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32. The diagonal of a rectangle is 9 cm more than its width. The length of a rectangle is 7 cm more than its width.
What is the area of the rectangle?

A	120 cm ²	B	130 cm ²	C	63 cm ²	D	56 cm ²
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2023

36. Solve: $x + 1 = 3$

A	2	B	4	C	-2	D	-4
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37. Solve: $2p = 4$

A	6	B	2	C	8	D	4
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38. Solve: $x(x - 1) = 0$

A	$x = 0$	B	$x = 1$	C	$x = 0$ or $x = -1$	D	$x = 0$ or $x = 1$
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39. Solve p: $(b - 3)(b + 2) = 0$

A	$b = -3$ or $b = -2$	B	$b = -3$ or $b = 2$	C	$b = 3$ or $b = 2$	D	$b = 3$ or $b = -2$
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40. Two times a certain number decreased by eight is equal to 18.
What is the equation?

A	$2(x - 8) = 18$	B	$2x - 8 = 18$	C	$2x + 8 = 18$	D	$2x + 8 = 18$
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41. Given: $y = m^2 - 3m$ and $m = 4$
What is the value of y ?

A	5	B	-1	C	4	D	-8
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42. Solve: $3^m = \frac{1}{9}$

A	1	B	2	C	-2	D	-3
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43. $y = x^2 + 1$

x	-4	-2	1	3	t
y	p	5	2	10	37

What is the value of p and t ?

A	$p = 10$ and $t = 5$	B	$p = -15$ and $t = 5$	C	$p = -15$ and $t = 6$	D	$p = 17$ and $t = 6$
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44. Solve: $x(x + 3) + 2(x - 3) = 0$

A	$x = -3$ or $x = -2$	B	$x = 3$ or $x = 2$	C	$x = 6$ or $x = 1$	D	$x = -6$ or $x = 1$
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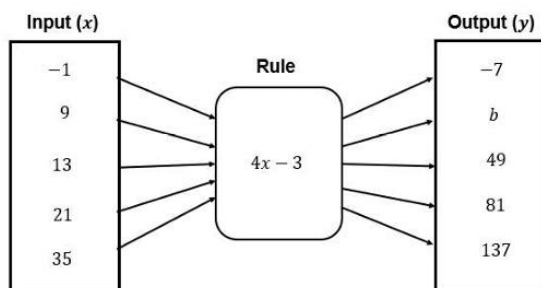
45. Solve: $(\frac{1}{2a} - 1)^2 = 1$

A	$a = 0$ or $a = 1$	B	$a = 0$ or $a = 4$	C	$a = 0$ or $a = -1$	D	$a = 0$ or $a = -4$
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46. A rectangle has an area of 40 m^2 and its breadth is 18 m less than its length.
What is the breadth of the rectangle??

A	1 m	B	2 m	C	19 m	D	20 m
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47. Consider the following flow diagram:



What is the value of b ?

A	$b = 33$	B	$b = 3$	C	$b = 9$	D	$b = 39$
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48. Given: $y = 3x - 2$

Which table represents the equation?

A	<table border="1"> <tr><td>x</td><td>-4</td><td>-1</td><td>2</td></tr> <tr><td>y</td><td>-10</td><td>-5</td><td>4</td></tr> </table>	x	-4	-1	2	y	-10	-5	4	C	<table border="1"> <tr><td>x</td><td>-2</td><td>0</td><td>2</td></tr> <tr><td>y</td><td>-8</td><td>-2</td><td>4</td></tr> </table>	x	-2	0	2	y	-8	-2	4
x	-4	-1	2																
y	-10	-5	4																
x	-2	0	2																
y	-8	-2	4																
B	<table border="1"> <tr><td>x</td><td>-3</td><td>0</td><td>3</td></tr> <tr><td>y</td><td>-11</td><td>2</td><td>7</td></tr> </table>	x	-3	0	3	y	-11	2	7	D	<table border="1"> <tr><td>x</td><td>-1</td><td>1</td><td>2</td></tr> <tr><td>y</td><td>-5</td><td>1</td><td>3</td></tr> </table>	x	-1	1	2	y	-5	1	3
x	-3	0	3																
y	-11	2	7																
x	-1	1	2																
y	-5	1	3																

49. All the inputs (n) are even numbers greater than 2. All the outputs (m) are odd numbers.
Which equation applies?

A	$m = 5n + \frac{n}{2}$	B	$m = (n + 1)^2$	C	$m = n(n + 4)$	D	$m = (\frac{1}{2})n + 3$
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36. $-2 = -4m$

What is the value of m ?

A	$-\frac{1}{2}$	B	2	C	-2	D	$\frac{1}{2}$
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37. $\frac{a}{7} = -2$

What is the value of a ?

A	14	B	-14	C	-9	D	9
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38. Solve: $(x - 4)^2 = 0$

A	$x = 4$	B	$x = -4$	C	$x = 2$ or $x = -2$	D	$x = 0$ or $x = 4$
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39. $(x - 3)(1 - x) = 0$

What is the value of x ?

A	$x = 3$ or $x = -1$	B	$x = -3$ or $x = 1$	C	$x = 3$ or $x = 1$	D	$x = -3$ or $x = -1$
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40. Marius buys cell phones for x rands each and sells them to make a profit. He determines his selling price, y rands, for each phone by doubling the price he paid and then subtracting three rand.

Which equation represents the scenario?

A	$y = (x - 3)^2$	B	$y = 2(x - 3)$	C	$y = x^2 - 3$	D	$y = 2x - 3$
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41. The perimeter of a square is given as $P = 4(x - 1)$ and $P = 16$ cm.

What is the value of x ?

A	5	B	21	C	3	D	13
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42. $y = x^2 - 1$

x	-2	-1	0	1	2
y	3	0	-1	1	3

Which ordered pair does NOT satisfy the equation??

A	$(-2; 3)$	B	$(0; -1)$	C	$(1; 1)$	D	$(2; 3)$
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43. $x^2 - 3x - 18 = 0$

What is the value of x ?

A	$x = -6$ of $x = -3$	B	$x = 6$ of $x = -3$	C	$x = -6$ of $x = 3$	D	$x = 6$ of $x = 3$
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44. $2^m + 0,5 = 8^0$

What is the value of m ?

A	1	B	-1	C	2	D	-3
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45. $\frac{6x}{3} - x = 4x^2$

Determine the value of x .

A	0 of $\frac{1}{4}$	B	3 of $\frac{1}{4}$	C	0 of $-\frac{1}{4}$	D	3 of $-\frac{1}{4}$
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46. The product of two consecutive even numbers is 120. Determine the two numbers.

A	-30 en 4	B	30 and 4 or -4 and -30	C	10 and 12 or -10 and -12	D	-10 and 12
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- 47.

Input	-1	2	5	8
Output	b	-1	2	5

What is the value of b ?

A	-2	B	-4	C	2	D	4
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48. $y = -2x - 3$

What is the output value if the input value is -5 ?

A	-3	B	-5	C	7	D	1
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2025

36. $(\frac{2}{3})x = 12$

Solve for x .

A	6	B	18	C	8	D	11
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37. $2x + 4 = x + 16$

Mary and Sipho's ages are represented by the equation above. Let Mary's age be x .

Which statement best describe the given equation?

A	Sipho is twice as old as Mary. In 4 years' time he will be 12 years older than Mary.	C	Sipho is twice as old as Mary. In 4 years' time he will be 16 years older than Mary.
B	Sipho is half as old as Mary. In 4 years' time he will be 12 years older than Mary.	D	Sipho is half as old as Mary. In 4 years' time he will be 16 years older than Mary.

38. $3x - 2 = 4$

Solve for x .

A	$x = 2$	B	$x = 3$	C	$x = -2$	D	$x = -3$
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39. $2^{x-1} = \frac{1}{32}$

Solve for x .

A	$x = -4$	B	$x = 4$	C	$x = -6$	D	$x = 6$
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40. $\frac{x}{5} = (\frac{1}{9})(y - 32)$

Determine y if $x = 10$.

A	14	B	43	C	13	D	50
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41.

x	-3	$-\frac{1}{4}$	0	0,5	$2\frac{1}{2}$
y	9	$\frac{1}{16}$	0	0,25	P

Determine the value of P .

A	$\frac{9}{2}$	B	$6\frac{1}{4}$	C	$4\frac{1}{4}$	D	$\frac{10}{4}$
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42. The length of a rectangular wall is $(x + 3)$ m and the height of the wall is $(x + 1)$ m.

The area of the wall is 15 m^2 .

What is the height of the wall?

A	-6 m	B	2 m	C	3 m	D	-5 m
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43. $a^2 = 36$

Solve for a .

A	$a = 6$	B	$a = 18$	C	$a = -6$ or $a = 6$	D	$a = -18$ or $a = 18$
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44. Solve for: $(2x - 4)(x + 1) = 0$

A	$x = -2$ or $x = 1$	B	$x = 2$ or $x = -1$	C	$x = 4$ or $x = -1$	D	$x = -4$ or $x = 1$
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45. $7x - 6 = x^2$

Solve for x .

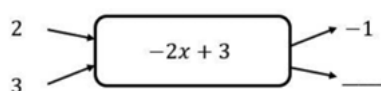
A	$x = 3$ or $x = 4$	B	$x = -3$ or $x = -4$	C	$x = 1$ or $x = 6$	D	$x = -1$ or $x = -6$
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46. $(a + 2)^2 - 4(a + 2) + 3 = 0$

Solve for a .

A	$a = -5$ or $a = -3$	B	$a = -5$ or $a = 1$	C	$a = 3$ or $a = 1$	D	$a = 1$ or $a = -1$
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47.



What is the missing output value?

A	-1	B	7	C	-3	D	9
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48.

x	0	1	2
y	5	8	11

Which equation represents the relationship shown in the table?

A	$y = x + 5$	B	$y = 3x + 5$	C	$y = x + 11$	D	$y = 5x + 3$
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49.

x	k	-2	0	3
y	-13	-7	-1	8

The table is represented by the equation $y = 3x - 1$.

What is the value of k ?

A	-3	B	-4	C	-42	D	-40
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