Exercises

GRADE 8

ALGEBRAIC EQUATIONS

Exercise 1

Complete the table by determining the value of the following expressions.

x	-4	-2	-1	0	1	2	5
$x+4$	0	2	3	4	5	6	9
$x+7$							
$10-x$							
$3x-2$							
x^2							
$\frac{x}{2}+1$							

Exercise 2

What numbers are hiding behind the blocks?

1) $\square + 8 = 11$

2) $\square - 4 = 6$

3) $6 \times \square = 24$

4) $\square - 11 = 22$

5) $\square \div 7 = 4$

6) $\square \div 1 = 100$

7) $\frac{\square}{6} = 3$

8) $\square \times 6 + 5 = 35$

9) $\square \times 8 = 0$

10) $\frac{20}{\square} + 4 = 5$

Exercise 3

Solve for x by making use of algebra.

1) $x + 3 = 6$

2) $\frac{x}{3} = 7$

3) $3x = 27$

4) $2x - 7 = 3$

5) $\frac{x}{4} + 8 = 16$

Exercise 4

Solve for x:

1) $7x + 1 = 22$

2) $8x + 10 = 2x - 14$

3) $2x + 9 = 4x - 19$

4) $5x + 20 = x + 16$

5) $5x - 1 = -x - 27$

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

7) $9x - 24 = 3x + 12$

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

Exercise 5

Solve for x:

1) $4(x-2)=20$

2) $3(x-2)=-7(x-3)$

3) $8-(x+4)=5(x-4)$

4) $14-6(2+x)=(-2-2x)$

5) $4x+2+x+8=3x-(3-x)$

6) $x(x-2)+1=2+x(x-1)$

Exercise 6

Solve for x:

1) $\frac{3x}{2}=x+3$

2) $2+\frac{x}{7}=5$

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

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

Exercise 7

Solve for x:

1) $6^x=36$

2) $7^{2x}=49$

3) $4^x=8$

4) $2^x-2=62$

5) $5.6^x=30$

6) $4^{3x}=32$

7) $8^x=1$

8) $5^{2x}=13^0$

9) $3^{2n+1}=81$

10) $3^x.3^{2x-1}=27$