

Exercise 3

1. a. $3x - 5$
b. $x + 6$
c. $2x - 1 + 2x + 1$ or $2x + 1 + 2x + 3$
d. $\frac{2x}{7}$
e. $4x - 20$

2. a. $3x = -9$
 $x = -3$
c. $-2x - 2 = -10$
 $x = 4$
e. $\frac{a}{-2} - 1 = 0$
 $a = -2$
g. $-3 - x = -7$
 $-x = -4$
 $x = 4$
i. $k - 5 = -2$
 $k = 3$

b. $x + 5 = -12$
 $x = -17$

d. $-4 + y = 3$
 $y = 7$

f. $b + 6 = 4$
 $b = -2$

h. $\frac{m}{3} + 1 = 2$
 $\frac{m}{3} = 1$
 $m = 3$

j. $\frac{a}{6} = -1$
 $a = -6$

3. a. $-1; -\frac{1}{2}$
c. $15; 19$
e. $6; 3$

b. $2; 4$

d. $-20; -25$

Answers:

1. $-4a^2 + 6a - 5$

2. $3abc - 6bc$

3. $10 - 3b^2 + 4a$

4. $-8 - ab - 2mn$

5. $3fg - 5gh - 2f$

6. $\frac{3x + y}{2xy} - 1$

7. $-4 - \frac{x}{y} + 5x - 7y$

1. **a.** the variable is a
b. the constant term is -5
c. $-4a^2$ means $-4 \times a \times a$ or $6a$ means $6 \times a$

2. **a.** the variables are a, b and c
b. there is no constant term
c. $3abc$ means $3 \times a \times b \times c$ or $-6bc$ means $-6 \times b \times c$

3. **a.** the variables are a and b
b. the constant term is $+10$
c. $-3b^2$ means $-3 \times b \times b$ or $4a$ means $4 \times a$

4. **a.** the variables are a, b, m and n
b. the constant term is -8
c. $-ab$ means $-a \times b$ or $-2mn$ means $-2 \times m \times n$

5. **a.** the variables are f, g and h
b. there is no constant term
c. $3fg$ means $3 \times f \times g$ or $-5gh$ means $-5 \times g \times h$ or $-2f$ means $-2 \times f$

6. **a.** the variables are x and y
b. the constant term is -1
c. $3x$ means $3 \times x$ or $2xy$ means $2 \times x \times y$ or the fraction minus 1
or divide each term of the numerator $3x + y$ by the denominator $2xy$

7. **a.** the variables are x and y
b. the constant term is -4
c. the fraction means divide $-x$ by y ,
or multiply 5 by x , or multiply -7 by y

8. $ax^3 - 2bx^3 + a$

9. $4a^2 - 5a^3 + 6 - 3a$

10. $-3x^2 + 8x^3 + 2x^6 - 3x^4$

8. a. the variables are a , b and x
b. there is no constant term
c. ax^3 means $a \times x^3$ or $-2bx^3$ means $-2 \times b \times x$
9. a. the descending powers of a are:
 $-5a^3 + 4a^2 - 3a + 6$.
b. the expression is in the third degree
c. the constant term is $+6$
d. the coefficient of a^3 is -5
10. a. the descending powers of x are:
 $2x^6 - 3x^4 + 8x^3 - 3x^2$
b. the expression is in the sixth degree
c. there is no constant term
d. the coefficient of x^4 is -3