



# Reviewing Algebra

- 1 Consider the expression  $6x - 4xy - y^2 - 3$ .
  - a What is the coefficient of  $x$ ?
  - b What is the coefficient of  $xy$ ?
  - c What is the constant term?
  - d Are there any like terms?
  - e Evaluate the expression if  $x = 2$  and  $y = 1$ .
  - f Evaluate the expression if  $x = 3$  and  $y = -2$ .
- 2 Write expressions for:
  - a the sum of 3 and  $4x$
  - b 5 less than  $6a$
  - c 2 less than the square of  $a$
  - d the product of  $a$  and  $b$
  - e the sum of the squares of  $x$  and  $y$
  - f the square root of the number that is 9 more than  $a$
- 3 Simplify by collecting like terms.
  - a  $5a - 4a$
  - b  $5ab + 2ab$
  - c  $7a - 1 - 2a$
  - d  $5a - b - 3b + a$
  - e  $a^2b - 2a^2b - 7$
  - f  $5b^2a + 2ab^2$
- 4 Simplify the following.
  - a  $7 \times 2x$
  - b  $5a \times (-3a)$

c  $10x \div 5$

d  $24a^2 \div (8a)$

e  $\frac{7ab^2}{7b}$

5 Use the distributive law to expand and simplify: ▶

a  $4(x + 2)$

b  $-3(x + 2)$

c  $-3b(2 - 3b)$

d  $3x + 2(1 - x)$

e  $8(x - 3) - 2(x - 4)$

6 Evaluate the following if  $a = 5$ ,  $b = 2$  and  $c = -2$ .

a  $2a + b$

b  $abc$

e  $a^2 + b^2$

d  $-3c + b$

c  $6a \div (3b)$

f  $c^2 \div b$

## Answers

Question 1.

a 6 b -4 c -3 d No e 2. f 35

Question 2.

a  $4x + 3$  b  $6a - 5$  c  $a^2 - 2$  d  $ab$  e  $x^2 + y^2$  f  $\sqrt{a+9}$

Question 3

a  $a$  b  $7ab$  c  $5a - 1$  d  $6a - 4b$  e  $-a^2b - 7$  f  $7ab^2$

Question 4

a  $14x$  b  $-15a^2$  c  $2x$  d  $3a$  e  $ab$

Question 5

a  $4x + 8$  b  $-3x - 6$  c  $-6b + 9b^2$  d  $x + 2$  e  $6x - 16$

Question 6

a 12 b -20 c 29 d 8 e 5 f 2