



# Expressions and Equations

## Algebra Review

- 1 Consider the expression  $5x + 2y + 8$ 
  - a) How many terms are in the expression
  - b) What is the coefficient of  $y$
  - c) What is the constant term
- 2 Write an algebraic expression for the following
  - a) 3 less than  $b$
  - b) 4 more than twice  $k$
  - c) the sum of  $x$  and  $y$  divided by 7
- 3 Evaluate these expressions if  $a = 6$   $b = 3$   $c = -2$ 
  - a)  $2a + b$
  - b)  $4b - c$
  - c)  $a^2 + 2b$
- 4 Simplify the following by collecting like terms
  - a)  $8a + 3a$
  - b)  $7m + 20 - 6m$
- 5 Simplify the following by collecting like terms
  - a)  $7a + 3b + 3a + b$
  - b)  $5ab + 2a + ab - 4a$
  - c)  $4a^2 - 3ab + 2a^2 + 7ba$
- 6 Simplify the following
  - a)  $5 \times 2b$
  - b)  $-3a \times 6b$
- 7 Simplify the following
  - a)  $\frac{5a}{10}$
  - b)  $10ab \div 15a$
- 8 Expand the following
  - a)  $5(a + 2)$
  - b)  $3(b - 6)$
  - b)  $2a(3a - 4)$
- 9 Expand the following and collect like terms
  - a)  $3(a + 5) - 8$
  - b)  $12 - 3(b - 2)$

## Answers

Question 1

a)  $3$

b)  $2$

c)  $8$

Question 2

a)  $b - 3$

b)  $2k + 4$

c)  $\frac{x+y}{7}$

Question 3

a)  $15$

b)  $14$

c)  $42$

Question 4

a)  $11a$

b)  $m + 20$

Question 5

a)  $10a + 4b$

b)  $6ab - 2a$

c)  $6a^2 + 4ab$

Question 6

a)  $10b$

b)  $-18ab$

Question 7

a)  $\frac{a}{2}$

b)  $\frac{2b}{3}$

Question 8 Expand the following

a)  $5a + 10$

b)  $3b - 18$

b)  $6a^2 - 8a$

Question 9

a)  $3a + 7$

b)  $18 - 3b$