

## Part 1. Sample Problems

Evaluate each of the algebraic expressions when  $p = 7$  and  $q = 3$ .

1.  $15 - p =$
2.  $pq =$
3.  $4p - q =$
4.  $q - 2p =$
5.  $p^2 - q^2 =$
6.  $(p - q)^2 =$
7.  $2q^2 =$
8.  $(2p)^2 =$
9.  $15 - \frac{p + q}{5} =$
10.  $(p + q)^2 - (5q - 2p)^4 =$

## Part 2. Practice Problems

1. Evaluate each of the algebraic expressions when  $x = 6$  and  $y = 8$ .

- (a)  $19 - y + x =$
- (b)  $19 - (y + x) =$
- (c)  $2x^2 - 5y + 3 =$
- (d)  $x^2 + y^2 =$
- (e)  $(x + y)^2 =$
- (f)  $3y - x =$
- (g)  $3(y - x) =$
- (h)  $\frac{5x - y}{2} =$
- (i)  $5x - \frac{y}{2} =$
- (j)  $\frac{x^2 - 5x + 4}{y - 3} =$

2. Consider the expression  $\frac{6a - 3b - ab + 2a^2}{2a - b} - 3$ .

- (a) Evaluate the expression if  $a = 5$  and  $b = 1$ .
- (b) Evaluate the expression if  $a = 5$  and  $b = 2$ .
- (c) Evaluate the expression if  $a = 5$  and  $b = 3$ .
- (d) Evaluate the expression if  $a = 4$  and  $b = 1$ .