Evaluating Algebraic Expressions

Algorithm

- 1. Substitute values of variable into the expression
- 2. Use the Order of Operations to evaluate arithmetic expressions

Example: If a = 2, b = 10 and c= -5, evaluate
$$b^2 - 4ac$$
,
 $10^2 - 4(2)(-5)$
 $= 100 - (-40)$
 $= 100 + 40$
 $= 140$

Evaluate each of the following algebraic expressions.

1. p-5, if p=8 2. f-c, if f=6, c=5

3.
$$3a + 4b$$
, if $a = 2$ and $b = 3$ 4. $2w + 2z$, if $w = -4$ and $z = 5$

5.
$$b^2 + 3d$$
, if $b = 4$ and $d = -4$ 6. $bc + de$, if $b = 2$, $c = -3$, $d = -5$, $e = 6$

7. abf, if a = -2, b = -3, f = -5 8. 7d - b, if = -2 and b = -3

9. $\frac{1}{2}(B+b)h$, if B = 12, b = 8, h = 5

10. prt, if p = 50, r = .02, t = 6