

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 $b^2 - 4ac$,

$$\begin{aligned} & 10^2 - 4(2)(-5) \\ &= 100 - (-40) \\ &= 100 + 40 \\ &= 140 \end{aligned}$$

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 $d = -2$ and $b = -3$
9. $\frac{1}{2}(B + b)h$, if $B = 12$, $b = 8$, $h = 5$
10. prt , if $p = 50$, $r = .02$, $t = 6$

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Evaluate each of the following algebraic expressions.

1. $x + 8$, if $x = 14$

2. $a - 7$, if $a = 18$

3. $3m + 5$, if $m = 6$

4. $2n - 4$, if $n = 11$

5. $p^2 + 3$, if $p = 5$

6. $4q + 2$, if $q = 7$

7. ab , if $a = 4$, $b = 9$

8. $2s + 3t$, if $s = 5$, $t = 4$

9. $\frac{1}{2}bh$, if $b = 16$, $h = 8$

10. prt , if $p = 100$, $r = .04$, $t = 2$

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Evaluate each of the following algebraic expressions.

1. $4x - 5$, if $x = 12$

2. $y + 3z$, if $y = 8$, $z = 6$

3. $a^2 - 9$, if $a = 10$

4. $3b + 4c$, if $b = 7$, $c = 5$

5. $mn + 8$, if $m = 9$, $n = 3$

6. $2p^2$, if $p = 8$

7. $qr - 6$, if $q = 11$, $r = 2$

8. $5s - 2t$, if $s = 13$, $t = 4$

9. $(a+b)c$, if $a = 4$, $b = 6$, $c = 3$

10. $3xy$, if $x = 5$, $y = 8$

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Evaluate each of the following algebraic expressions.

1. $2a + 3b$, if $a = 8$, $b = 9$

2. $c^2 + d$, if $c = 11$, $d = 5$

3. $4m - 2n$, if $m = 15$, $n = 7$

4. $pq + 12$, if $p = 6$, $q = 8$

5. $3r^2$, if $r = 9$

6. $(x+y)^2$, if $x = 3$, $y = 7$

7. $2ab - c$, if $a = 6$, $b = 4$, $c = 5$

8. $st + uv$, if $s = 3$, $t = 9$, $u = 5$, $v = 4$

9. $\frac{1}{2}(B+b)h$, if $B = 20$, $b = 12$, $h = 6$

10. prt , if $p = 250$, $r = .06$, $t = 4$