

## Substituting Values into Algebraic Expressions

Example 1: Calculate  $3m + 6$  if you are given that  $m = 2$

Answer: You have to “substitute” or “replace” the variable “m” with given value for “m”, which in this case is 2.

$$\begin{aligned}
 & 3m + 6 \\
 = & \underbrace{3(2)} + 6 \\
 = & 6 + 6 \\
 = & 12
 \end{aligned}$$

MAKE SURE YOU  
SHOW YOUR WORK  
LIKE I HAVE!!!

NOTE: You must follow BEDMAS when calculating the value:

Example 2: Calculate  $3x + 8$  if you are given  $x = -2$

Answer:  $3x + 8$  if  $x = -2$

$$\begin{aligned}
 = & \underbrace{3(-2)} + 8 \\
 = & -6 + 8 \\
 = & +2
 \end{aligned}$$

Now try a few of these on your own. Remember to follow your order of operations. (BEDMAS)

Calculate the following:

~~B~~ADMAS

$$\begin{aligned} \text{a) } & 12 - 2p \quad \text{when } p = 2 \\ & = 12 - 2(2) \\ & = 12 - 4 \\ & = 8 \end{aligned}$$

$$\begin{aligned} \text{b) } & 9 + 2r - 6 \quad \text{when } r = 4 \\ & = 9 + 2(4) - 6 \\ & = 9 + 8 - 6 \\ & = 17 - 6 \\ & = 11 \end{aligned}$$

$$\begin{aligned} \text{c) } & a + 6b \quad \text{when } a = 2 \quad b = 3 \\ & = (2) + 6(3) \\ & = 2 + 18 \\ & = 20 \end{aligned}$$

Complete the input/output chart Show work  
 Table of values

$$3n - 1$$

n	output
0	-1
1	2
2	5
3	8
4	11

$n=1$   
 $3n-1$   
 $=3(1)-1$   
 $=3-1$   
 $=2$   
 (1, 2)  
 Input output

increase by 1  
 ✓  
 ✓  
 ✓

increases by 3  
 +3  
 +3  
 +3

$n=0$   
 $3n-1$   
 $3(0)-1$   
 $0-1$   
 $-1$

Input output  
 (0, -1)

$n=2$   
 $3n-1$   
 $3(2)-1$   
 $6-1$   
 $5$   
 (2, 5)

## Homework Worksheet

#1 a to h

#2 i p q r s

#4 a b c d

#5 a b e

$$\begin{aligned} 1a) & 3(b) \\ & -3(5) \\ & = 15 \end{aligned}$$

## Attachments

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Sub the x value into expression.pdf