



Warm Up

Grade 7
Date: Oct. 3

1) Write an algebraic expression for "4 is subtracted from a number that is tripled"

Let n represent a number

$$3n - 4$$

2) Identify the coefficient, variable and constant for each.

	# before letter coefficient	letter Variable	# alone Constant
a) $6x + 21$	6	x	21
b) $y - 3$	1	y	3
c) k	1	k	0 none

a number decreased by 8
 $n - 8$

Double a number increased by 11
 $2n + 11$

6 more than 4 times a number
 $4n + 6$ or $6 + 4n$

Go over homework, pg. 18 # 1-6

1. Expression	Numerical Coefficient	Variable	Constant
(a) $3x + 2$	3	x	2
(b) $5n$	5	n	- or 0
(c) $w + 3$	1	w	3
(d) $2p + 4$	2	p	4

2. variable p, numerical coefficient 7, constant 9

$$7p + 9 \quad 7p - 9$$

3. (a) six more than a number

$$m = \text{the number} \\ m + 6$$

(b) a number multiplied by eight

$$s = \text{the number} \\ 8 \times s \text{ or } 8s \quad \text{or } s \times 8$$

(c) a number decreased by six

$$v = \text{the number} \\ v - 6$$

(d) a number divided by four

$$z = \text{the number} \\ \frac{z}{4} \quad (z \div 4)$$

4 \$4 for each hour babysitting

(i) 5 h $4 \times 5 = \$20$

(ii) 8 h $4 \times 8 = \$32$

(b) for t hours

$$4 \times t$$

5. (a) double a number and add three

d = the number
 $2d + 3$

(b) subtract five from a number, then multiply by two

n = the number
 $(n - 5) \times 2$

(c) divide a number by seven, then add six

p = the number
 $\frac{p}{7} + 6$

(d) a number r is subtracted from twenty eight

r = the number
 $28 - r$

(e) twenty eight is subtracted from a number

u = the number
 $u - 28$

6. (a) $a = \text{the number (for all)}$
four more than a number
 $a + 4$

(b) a number added to four

$$4 + a$$

(c) four less than a number

$$a - 4$$

(d) a number subtracted from four

$$4 - a$$

What are the differences? likes?

4 less than 9	$9 - 4 = 5$
4 less than 15	$15 - 4 = 11$
4 less than 20	$20 - 4 = 16$
4 less than 85	$85 - 4 = 81$
4 less than a number	$a - 4$



Evaluating Expressions

Remember to follow

~~B~~ ~~I~~ ~~D~~ ~~M~~ ~~A~~ ~~S~~

We have been saying that a variable is an unknown value. However, sometimes you will be given the value of the variable and you will be asked to evaluate the expression. In other words, you have to find the value of the expression by substituting the given value for the variable.

Examples:

1. Evaluate the following.



(a) $a + 9$, if $a = 20$ $(20) + 9$ 29	(b) $35 - g$, if $g = 14$ $35 - (14)$ 21	** (c) $7m$, if $m = 11$ $7(11)$ 77
(d) $4e + 6$, $e = 8$ $4(8) + 6$ $32 + 6$ $= 38$	(e) $t / 6 + 11$, $t = 24$ $(24) / 6 + 11$ $4 + 11$ (15)	(f) $8c - 5$, $c = 2$ $8(2) - 5$ $16 - 5$ (11)

means
MULTIPLY

2. Evaluate the expression $3r + 7$ for :

(a) $r = 8$
 $3r + 7$
 $3(8) + 7$
 $24 + 7$
 (31)

(b) $r = 5$
 $3r + 7$
 $3(5) + 7$
 $15 + 7$
 (22)

(c) $r = 10$
 $3r + 7$
 $= 3(10) + 7$
 $30 + 7$
 (37)

Need more practice....

Evaluate by replacing v with 3 show work

a) $v + 7$

$$\begin{array}{r} \downarrow \\ 3 + 7 \\ 10 \end{array}$$

b) $2v - 1$

$$\begin{array}{r} 2(3) - 1 \\ \underline{\quad} \\ 6 - 1 \\ 5 \end{array}$$

c) $13 - 3v$

$$\begin{array}{r} 13 - 3(3) \\ \underline{\quad} \\ 13 - 9 \\ 4 \end{array}$$

Remember to follow

B DMAS

Class/Homework

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#7 (a,b,c,d,e,f)

#8 (a,b,c,d,e,f)

#9 (a,b,c)

#10 (a,b,c,d,e,f)

} Show Work

gr. 8

363

4ab
5acg

Earn \$7/hr \rightarrow week \leftarrow
 \$9/hr \rightarrow weekend

a) 8h \rightarrow week
 12h \rightarrow weekend

$$\$7 \times 8 = \$56$$

$$\$9 \times 12 = \$108$$

$$\underline{\hspace{1cm}}$$

$$\$164$$

$$\$7(\text{week}) + \$9(\text{weekend}) = \text{Total}$$

b)

$$7x + 9(5)$$

$$\boxed{7x + 45}$$

c)

$$115 = 7x + 45$$

$$70 + 45$$

$$\hat{7}(10)$$

$$x = 10$$

$$115 = 7x + 45$$

$$70 = 7x$$

$$\div 7 \quad \div 7$$

$$\boxed{10 = x}$$

4a) $y = 4x - 1$

x	y
0	-1
1	3
2	7
3	11
4	15
5	19

As x increases
by 1, y increases
by increases by 4.
Diagonal line.

b)

x	y
0	
1	
2	
3	
4	