



Warm Up

Grade 7

Oct. 12, 2022

let 'n' represent a number

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

multiply by 3

$$3n - 4$$

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

	coefficient	Variable	Constant
a) $6x + 21$	6	x	21
b) $y - 3$	1	y	3
c) k	1	k	0

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 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

BYDMAS

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 $a = 20$

$$\begin{array}{l} \downarrow \\ (20) + 9 \\ \hline = 29 \end{array}$$

(b) $35 - g$, if $g = 14$

$$\begin{array}{l} \downarrow \\ 35 - (14) \\ \hline = 21 \end{array}$$

**(c) $7m$, if $m = 11$

$$\begin{array}{l} \downarrow \\ 7 \times (11) \\ \hline = 77 \end{array}$$

(d) $4e + 6$, $e = 8$

$$\begin{array}{l} \downarrow \\ 4(8) + 6 \\ \hline 32 + 6 \\ \hline = 38 \end{array}$$

(e) $t / 6 + 11$, $t = 24$

$$\begin{array}{l} \downarrow \\ (24) / 6 + 11 \\ \hline 4 + 11 \\ \hline = 15 \end{array}$$

(f) $8c - 5$, $c = 2$

$$\begin{array}{l} \downarrow \\ 8(2) - 5 \\ \hline 16 - 5 \\ \hline = 11 \end{array}$$

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

(a) $r = 8$

$$\begin{array}{l} 3r + 7 \\ \downarrow \\ 3(8) + 7 \\ \hline 24 + 7 \\ \hline = 31 \end{array}$$

(b) $r = 5$

$$\begin{array}{l} 3r + 7 \\ \downarrow \\ 3(5) + 7 \\ \hline 15 + 7 \\ \hline = 22 \end{array}$$

(c) $r = 10$

$$\begin{array}{l} 3r + 7 \\ \downarrow \\ 3(10) + 7 \\ \hline 30 + 7 \\ \hline = 37 \end{array}$$

Need more practice....

Remember to follow

B DMAS

Evaluate by replacing v with 3. ^{show work}

a) $v + 7$
 $(3) + 7$
 $\boxed{10}$

b) $2v - 1$
 $2(3) - 1$
 $6 - 1$
 $\boxed{5}$

c) $13 - 3v$
 $13 - 3(3)$
 $13 - 9$
 $\boxed{4}$

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#7 (d,e,f)

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

#9 (a,b,c)

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



Show Work