

Warm Up Grade 7

1) In the expression $6 + 8d$

-constant 6 (# alone)

- Coefficient 8 (# in front of letter)

-Variable d (letter)

-Operation(s) add, multiply

2) If $f=3$ what does $7f - 4$ equal?

$$\begin{array}{r} \downarrow \\ 7(3) - 4 \\ \hline 21 - 4 \\ \hline \boxed{17} \end{array}$$

Name: _____

Unit 1 Worksheet 1
Combining Like terms

1. Simplify the following:

(a) $4v + 7v$

(b) $5n + 8n - 4n$

(c) $9g - 4g$

(d) $3a + 5 + 8 + 6a$

(e) $7 + 4b + 6 + 3b$

(f) $10f + 8 - 7f + 9$

(g) $3d + 9c - 2d + 2c + 6d$

(h) $4s + 12 - 3 + 8s - 5 + 3s$

(i) $4r + 7w + 8r + w + r$

(j) $16 + h + 4h - 7 - 2h + h$

(k) $m + m + m + m$

(l) $4 + y + 2 + 2y + y + 1$

(m) $20u + 7 + 8 - 3u + 7v$

(n) $b + f + 2f + 3b + f + 4b$

(o) $3e + 7t + 5 + 4t + 8$

(p) $3x + 6y + 3x - 4y - 9$

(q) $9j - 7 + 4j + 10$

(r) $3x + 7y + 2xy + 4xy + 5x$

(s) $6h + 9b - 5h + 4b + 2h$

(t) $9a + 6b + 3ab + 4b + 2ab + a$

(u) $7u + 7uv + 8u - 2uv + 9 - 6u - 8$

2. Simplify the following, then evaluate with the given values.

(a) $4a + 8 - a + 6$, $a = 5$

(b) $3g - 2g + h + g - 7$, $g = 10$, $h = 3$

(c) $5s + 2t + s + t - 7$, $s = 2$, $t = 9$

(d) $x + y + 3 + 2x + 5y + 6x$, $x = -1$, $y = 4$

(e) $2a + 6ab - a + b + 3ab$, $a = 6$, $b = 10$

(f) $7k + 8 - 4 - 3k + 6 + k$, $k = 8$

3) Which of these numbers is 37 656 divisible by? Explain how you know WITHOUT a calculator. (Do on your own paper)

- a) 2 b) 3 c) 4 d) 5 e) 6 f) 8 g) 9 h) 10

4) Use digits 0 to 9. Replace the ___ in each number to make it divisible by 3.

Find as many answers as you can.

- a) 5_9 b) 7 _621

5) Use digits 0 to 9. Replace the ___ in each number to make it divisible by 4.

Find as many answers as you can.

- a) 1 54___ b) 12 _16 c) 2_0

6) In each of the following state the coefficient, constant, variable and what operations are in the expression.

a) $12k - 7$

Coefficient: _____

Constant: _____

Variable: _____

Op: _____

b) $5 + 8p$

Coefficient: _____

Constant: _____

Variable: _____

Op: _____

c) $m - 13$

Coefficient: _____

Constant: _____

Variable: _____

Op: _____

d) $6t$

Coefficient: _____

Constant: _____

Variable: _____

Op: _____

e) $72/h$

Coefficient: _____

Constant: _____

Variable: _____

Op: _____

7) Write the above expressions into a phrase.

Combining Like terms

1. Simplify the following:

(a) $4v + 7v = 11v$

(b) $5n + 8n - 4n = 9n$

(c) $9g - 4g = 5g$

(d) $3a + 5 + 8 + 6a = 9a + 13$

(e) $7 + 4b + 6 + 3b = 7b + 13$

(f) $10f + 8 - 7f + 9 = 3f + 17$

(g) $3d + 9c - 2d + 2c + 6d = 7d + 11c$

(h) $4s + 12 - 3 + 8s - 5 + 3s$

(i) $4r + 7w + 8r + w + r = 13r + 8w$

(j) $16 + h + 4h - 7 - 2h + h$

★ ★ ★
 (k) $m + m + m + m = 4m$
 ★ ★ ★

(l) $4 + y + 2 + 2y + y + 1$

(m) $20u + 7 + 8 - 3u + 7v$

(n) $b + f + 2f + 3b + f + 4b$

(o) $3e + 7t + 5 + 4t + 8$

(p) $3x + 6y + 3x - 4y - 9$

(q) $9j - 7 + 4j + 10$

(r) $3x + 7y + 2xy + 4xy + 5x$

(s) $6h + 9b - 5h + 4b + 2h$

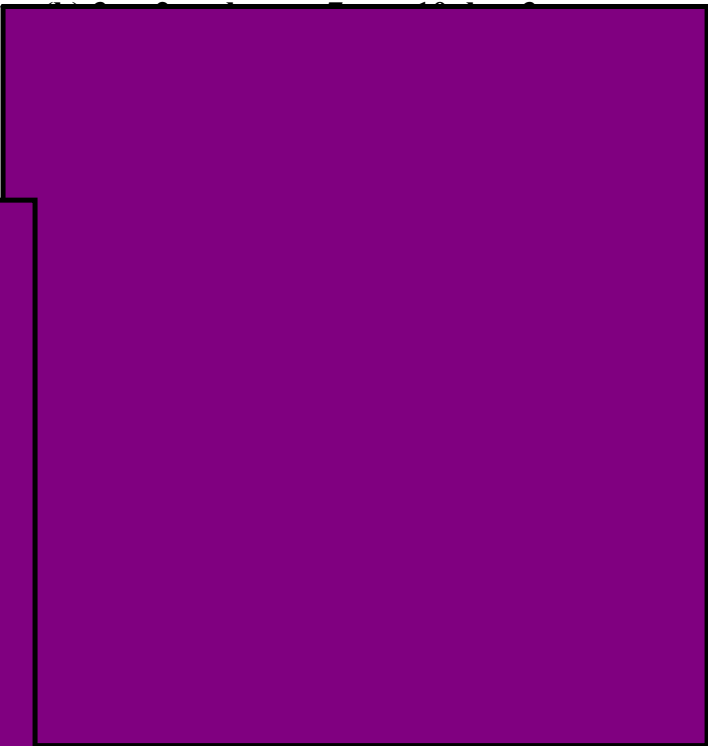
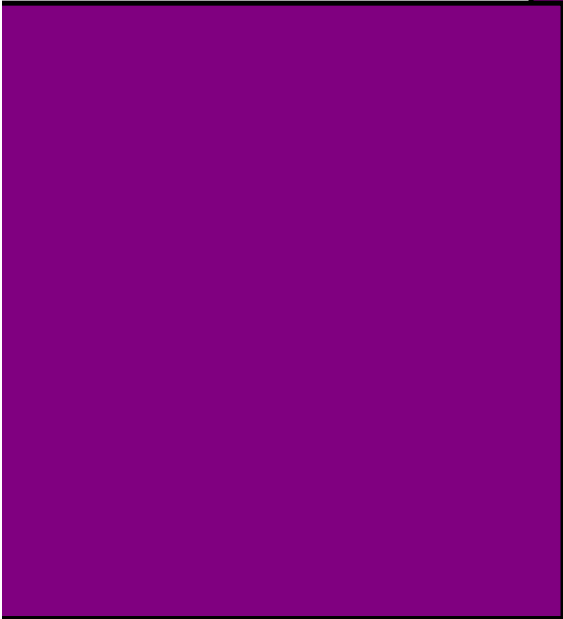
(t) $9a + 6b + 3ab + 4b + 2ab + a$

(u) $7u - 7uv + 8u - 2uv + 9 - 6u - 8$

2. Simplify the following, then evaluate with the given values.

(a) $4a + 8 - a + 6, a = 5$

$3a + 14$
 $3 \times 5 + 14$
 $15 + 14 = 29$



2. Simplify the following, then evaluate with the given values.

(a) $4a + 8 - a + 6$, $a = 5$

$$\begin{aligned} & \underline{3a} + 14 \\ & 3 \times 5 + 14 \\ & 15 + 14 = 29 \end{aligned}$$

(b) $3g - 2g + h + g - 7$, $g = 10$, $h = 3$

$$\begin{aligned} & \underline{2g} + h - 7 \\ & 2 \times 10 + 3 - 7 \\ & 20 + 3 - 7 \\ & 16 \end{aligned}$$

(c) $5s + 2t + s + t - 7$, $s = 2$, $t = 9$

$$\begin{aligned} & \underline{6s} + \underline{3t} - 7 \\ & 6 \times 2 + 3 \times 9 - 7 \\ & 12 + 27 - 7 \\ & 32 \end{aligned}$$

(d) $x + y + 3 + 2x + 5y + 6x$, $x = -1$, $y = 4$

$$\begin{aligned} & \underline{9x} + \underline{6y} + 3 \\ & 9 \times -1 + 6 \times 4 + 3 \\ & -9 + 24 + 3 \\ & 18 \end{aligned}$$

(e) $2a + 6ab - a + b + 3ab$, $a = 6$, $b = 10$

$$\begin{aligned} & \underline{a} + \underline{b} + \underline{9ab} \\ & 6 + 10 + 9 \times 6 \times 10 \\ & 6 + 10 + 540 \\ & 556 \end{aligned}$$

(f) $7k + 8 - 4 - 3k + 6 + k$, $k = 8$

$$\begin{aligned} & \underline{5k} + 10 \\ & 5 \times 8 + 10 \\ & 40 + 10 \\ & 50 \end{aligned}$$



Finish sheet from yesterday

Homework Sheet Ex Prac 3 # 1-4
Sheet 347# 1-4,7



Math 7 Extra Practice 3

Name: _____

Lesson 1.3: Algebraic Expressions

No equal

(letter with operations.)

1. Write an algebraic expression for each statement.

Let $x \equiv$ a number

- a) Nine more than a number *$x + 9$*
- b) Eighteen times a number
- c) A number divided by seven *$9 + x$*
- d) Twelve less than a number
- e) Six more than eleven times a number
- f) Eight times a number is subtracted from 23
- g) Thirteen subtracted from the product of three times a number

2. Write each algebraic expression in words. Then evaluate each expression for $n = 6$.

- a) $4n$
- b) $n + 8$
- c) $\frac{n}{2}$
- d) $7 + 3n$
- e) $10n - 15$

$4(6) = 24$

f) $50 - 8n$

3. A person earns \$6/h shovelling snow. Find the money earned for each time.

- a) 4 h
- b) 9 h
- c) t hours

4. Which algebraic expression can be used to describe each phrase?

Circle the correct answer.

- a) A number decreased by 6 $n - 6$ $6 - n$ $\frac{n}{6}$
- b) A number divided by 2 $a + \frac{1}{2}$ $\frac{1}{2} - a$ $\frac{a}{2}$
- c) Double a number, then subtract 1. $2x - 1$ $1 - 2x$ $x^2 - 1$
- d) Five less than four times a number $5 - 4n$ $4n - 5$ $4(n - 5)$
- e) Twelve added to twice a number $2n + 12$ $2(n + 12)$ $12 - 2n$

Thinking Log

I have been asked to find.....

Here's what I'll try first.....

To solve this problem I'll

And then....

And then

Here's my solution

Possible Solution

Thinking Log

I have been asked to find.....

how many matches there are in the first round if there are 9 wrestlers and each player wrestles every other player

Here's what I'll try first.....

I will model each player in a different colored couter

To solve this problem I'll

then see how many matches Player 1 will have:

He will have 8 matches since he cannot wrestle himself

And then....

I will see how many matches Player 2 will have:

He will have 7, because he has already wrestled Player 1

And then

I will do the same for Player 3:

He will have 6 matches because he has already wrestled players 1 and 2

Then

I notice a pattern. The number of matches decreases by 1 each time. By the time I get to player 9, he will have already wrestled every other player

Here's my solution

$$8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 = 36$$

There will be 36 matches in the first round

Homework pg. 15 # 1,2,3
Do Thinking logs

Attachments

Extra Practice 3 Equations PDF.pdf