

# Mon Homework

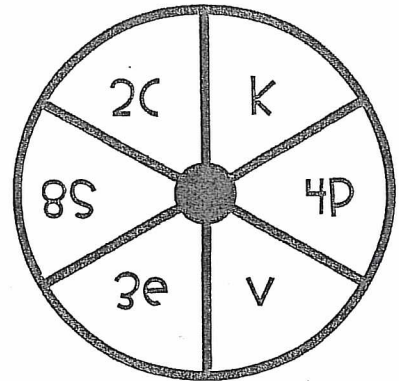
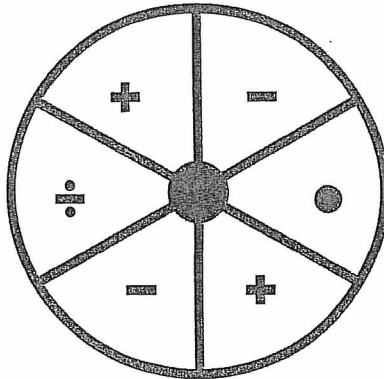
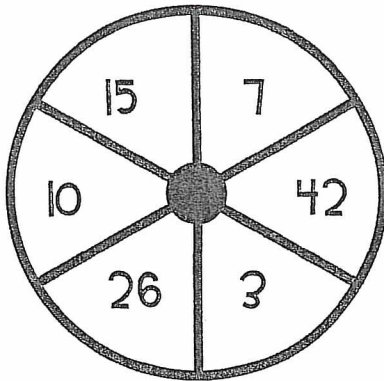
Unit: Expressions  
Homework 6

Name \_\_\_\_\_

Date \_\_\_\_\_ Pd \_\_\_\_\_

## WRITING EXPRESSIONS

Spin each spinner. Then, create an algebraic and verbal expression using those terms.



NUMBER	OPERATION	VARIABLE	ALGEBRAIC EXPRESSION	VERBAL EXPRESSION

# Tuesday Homework



## Unit 25 Homework

Name \_\_\_\_\_

Standard 6.7(D) – Read

- 1 Shawna collected cans for 3 consecutive days. She collected 22 cans on Friday, 28 cans on Saturday, and 16 cans on Sunday. Using the associative property of addition, write two equivalent expressions that could be used to find the total number of cans Shawna collected in 3 days.

\_\_\_\_\_

\_\_\_\_\_

- 2 For each set of equivalent expressions, state the specific property that justifies each equivalence.

a.  $4x - 8 = 4(x - 2)$

\_\_\_\_\_

b.  $1 \cdot 7 = 7$

\_\_\_\_\_

c.  $(\frac{1}{2}b)h = \frac{1}{2}(bh)$

\_\_\_\_\_

d.  $3(4 + w) = 3(w + 4)$

\_\_\_\_\_

e.  $(\frac{2}{3})(\frac{3}{2}) = 1$

\_\_\_\_\_

f.  $-2x + 0 = -2x$

\_\_\_\_\_

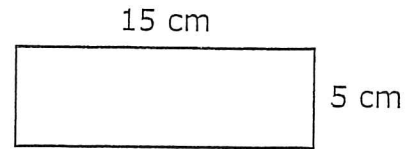
g.  $(\frac{1}{12})(\frac{4}{x}) = (\frac{4}{x})(\frac{1}{12})$

\_\_\_\_\_

h.  $17 + (-17) = 0$

\_\_\_\_\_

Use the model to answer questions 3-5



- 3 Using the commutative property of multiplication, write two equivalent expressions that could be used to find the area of the figure above.

\_\_\_\_\_

- 4 Using the commutative property of addition, write two equivalent expressions that could be used to find the perimeter of the figure above.

\_\_\_\_\_

- 5 Using the distributive property, write two equivalent expressions that could be used to find the perimeter of the figure above.

\_\_\_\_\_

- 6 Apply the identity property of multiplication to the following problem to find common denominators. Then find the sum of the two fractions.

$$\begin{array}{r} \frac{2}{3} \\ + \frac{1}{2} \\ \hline \end{array}$$

### Connections

Create a set of cards to use as a game to help learn the operation properties. Using index cards, write one property on each card. On a separate card, write the definition of the property and an example. Play *Memory*, *Go Fish*, or another card game with a friend or family member to help you learn the properties.

# Wednesday Homework

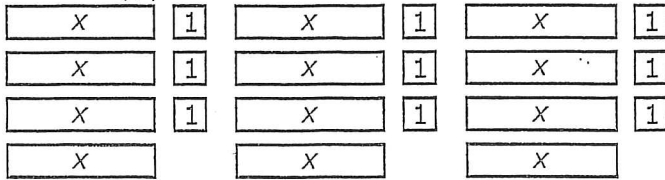


## Unit 24 Guided Practice

Name \_\_\_\_\_

Standards 6.7(B) – Supporting, 6.7(C) – Supporting

- 1 Mrs. Jacobson asks each group of students to write an expression equivalent to the model below.



The table shows the groups' expressions.

Group	Expression
1	$3(4x) + 3(3)$
2	$4x(3 + 3 + 3)$
3	$3(4x + 3)$
4	$4x + 3 + 4x + 3 + 4x + 3$

Which group wrote an incorrect expression?

- (A) Group 1                      (C) Group 3  
 (B) Group 2                      (D) Group 4
- 2 Which of the following is true for  $2g + 6$ ?
- I. Representative of an equation  
 II. Multiple possible values for  $g$   
 III. Representative of an expression  
 IV. Only one possible value for  $g$
- (F) I only                      (H) II and III only  
 (G) III and IV only              (J) I, II, and III only
- 3 Nia plans to give one necklace and one sparkle pen to each girl who attends her birthday party. Necklaces cost \$4 each and sparkle pens cost \$2 each. She uses the expression  $4g + 2g$  to calculate the cost, in dollars, of the gifts for the girls attending the party. Which of the following is equivalent to Nia's expression?
- (A)  $6(g + g)$                       (C)  $6g^2$   
 (B)  $6g$                               (D)  $8g$

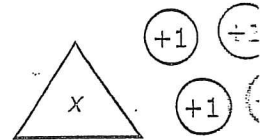
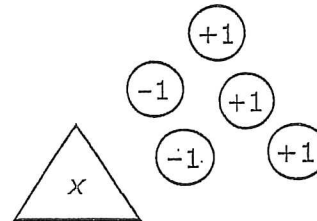
- 4 Meghan tries to convince her classmate Fiona that  $2x + 3 = 10$  represents an expression. Fiona disagrees and thinks that it represents an equation. Who is correct?

- (F) Meghan is correct because expressions contain variables.  
 (G) Fiona is correct because equations always contain an equal sign.  
 (H) Both girls are correct because expressions and equations are the same thing.  
 (J) Neither girl is correct.

- 5 Kareem and Natalie each created an expression using the models shown below.

Kareem's Expression

Natalie's Expression



What would Natalie need to add to her model for it to be equivalent to Kareem's model?

- (A)  $+1$   
 (B)  $-1$   $-1$   
 (C)  $-1$   $-1$   $-1$   
 (D)  $+1$   $+1$   $+1$
- 6 Which of the following does NOT represent an equation?
- (F) Twice a number is six.  
 (G)  $x + 6 = 10$   
 (H) 6 years older than Mike  
 (J)  $-9 + 2 = -7$

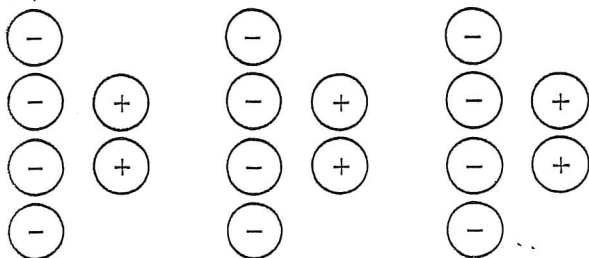


Standards 6.7(B) – Supporting, 6.7(C) – Supporting

1 Which of the following is NOT true about equations?

- A Must include an equal sign
- B A phrase that contains a single term
- C Show two equivalent expressions
- D May contain numbers and variables

2 Which of the following could NOT be used to represent an expression equivalent to the model shown below?

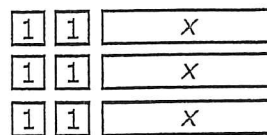


- F  $3(-4) + 3(2)$
- G  $-12 + 6$
- H  $-4(3 + 2)$
- J  $3(-2)$

3 Which of the following represents an expression?

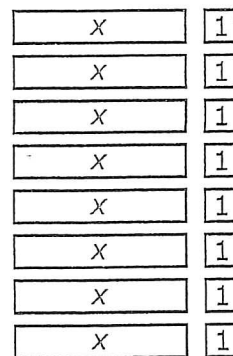
- I. Four years less than Tiffany's age
  - II. The sum of a number and six
  - III. Tim saves \$30 more than Jeremy
  - IV. The difference of seven and three
- A II only
  - B I and II only
  - C III only
  - D I, II, and IV only

4 Look at the model below.



Which of the following statements of equality are true?

- F  $3(x + 2) = 3x + 5$
  - G  $3x + 26 = 2(3 + 2x)$
  - H  $3(2 + x) = 6 + 3x$
  - J  $6(2 + 2x) = 12 + 2x$
- 5 Which of the following best represents an expression?
- A  $-2x + 20$
  - B  $13 + 12 = 25$
  - C  $-3y = 27$
  - D  $\frac{f}{5} = 30$
- 6 Kelvin modeled an expression using the Algebra Tiles™ shown.



Which of the following could NOT be the expression Kelvin modeled?

- F  $2(4x + 4)$
- G  $6 + 4x + 2x + 2 + x + x$
- H  $4(2x) + 4(2)$
- J  $3x + 2 + 3x + 2 + 3x + 4$

# REVIEW DUE FRIDAY, NOV 22, 2019

Unit: Expressions  
Review

Name \_\_\_\_\_

Date \_\_\_\_\_ Pd \_\_\_\_\_

## EXPRESSIONS UNIT Study Guide

Solve each of the problems below. These represent the types of questions on your test. Be sure to ask questions if you need more help with a topic.

### I CAN GENERATE EQUIVALENT EXPRESSIONS USING WHOLE NUMBER EXPONENTS. 6.7A

1. Write each expression in expanded form.

a.  $18^1$  \_\_\_\_\_

b.  $q^3$  \_\_\_\_\_

c.  $6^7$  \_\_\_\_\_

d.  $7^6$  \_\_\_\_\_

2. Write each expression in standard form.

a.  $8 \cdot 8 \cdot 8 \cdot 8$  \_\_\_\_\_

b.  $3 \cdot 3 \cdot 3 \cdot 3$  \_\_\_\_\_

c.  $5 \cdot 5 \cdot 5$  \_\_\_\_\_

d.  $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$  \_\_\_\_\_

### I CAN GENERATE EQUIVALENT EXPRESSIONS USING ORDER OF OPERATIONS. 6.7A

3.

$$\frac{(18 - 6) + 4 \cdot 4}{7}$$

4.

$$(12^2 - 20) - 18$$

5.

$$15^2 - (3 \cdot 5) + 7$$

6. Which operation is performed in the second step of the problem below?

$$7 \cdot 6 - (18 + 3^2)$$

7. Which operation is performed in the second step of the problem below?

$$\frac{7^2 - 9}{8}$$

Monday

P  
E  
M  
D  
A  
S



**I CAN GENERATE EQUIVALENT EXPRESSIONS USING PRIME FACTORIZATION.**

**6.7A**

8. What is the prime factorization of 152?

Expanded: \_\_\_\_\_

Exponent: \_\_\_\_\_

9. What is the prime factorization of 196?

Expanded: \_\_\_\_\_

Exponent: \_\_\_\_\_

10. What is the prime factorization of 72?

Expanded: \_\_\_\_\_

Exponent: \_\_\_\_\_

**I CAN GENERATE EQUIVALENT EXPRESSIONS USING PROPERTIES OF OPERATIONS.**

**6.7d**

11. On a quiz show, the contestant who gets the answer correct in the shortest amount of time wins. The host asks for the solution to  $49+83+51$ . Contestant number one quickly found the sum of 49 and 51 to be 100, then added 83 to get 183. Which property did the contestant use?

12. Jamie was really struggling to multiply two digit numbers together. Mrs. Brack helped her with the problem  $13 \cdot (20 \cdot 5)$  by multiplying 20 by 5 and then by 13, which is 1300. What property did Mrs. Brack use?

13. Complete the table below.

PROPERTY	PROBLEM	USE THE PROPERTY
Commutative Property of Addition	$7.5 + s$	
Additive Identity Property	$k + 0$	
Multiplicative Identity Property	$b \cdot 1$	
Commutative Property of Multiplication	$c \cdot d \cdot e$	
Zero Product Property	$v \cdot 0$	
Additive Inverse Property	$a + b = 0$	
Multiplicative Inverse Property	$\frac{3}{4} \cdot c = 1$	

Tuesday

Review Due Friday, Nov 22, 2019

I CAN GENERATE EQUIVALENT EXPRESSIONS USING PROPERTIES OF OPERATIONS. 6.7d		
14. $8(4x + 9)$	15. $3(5x + 2)$	16. $2(8x + 10)$
17. $15 - (x \cdot 9)$	18. $16 \cdot 11 \cdot 8$	19. $(17 + 8) + 11$

WEDNESDAY

I CAN DISTINGUISH BETWEEN EXPRESSIONS AND EQUATIONS. 6.7B
20. Write an equation or an expression to represent the verbal description below.  a. six times a number less nine _____ b. eight times the quotient of 6 and 3 _____ c. the difference between a number and 12 _____ d. five times a number is 30 _____
21. Label each of the following as either an expression or an equation.  a. $18 - 35$ _____ b. the sum of a number and twelve is ten _____ c. two is one-half of a number _____ d. one-fourth of eight minus a number _____
22. Four students write algebraic expressions and equations on their whiteboard. Which of the students wrote expressions?  Student 1: $\frac{3}{4}x + 6$ Student 2: $3x = \frac{2}{3}$ Student 3: $4 - \frac{3}{4} = x$ Student 4: $8 - x$

THURSDAY

i CAN write eXPRESSIONS.	
23. The product of a number and eighteen	24. The price decreased by nine dollars
25. Twelve dollars times the number of hours	26. The sum of c squared and fourteen
27. Two times a number decreased by eleven	28. Five times a number divided by four

i CAN determine if eXPRESSIONS ARE equivalent.		6.7C
[veRBAL deSCRIPTION]	[PICTure]	
[VARIABLES]	[eXPRESSION]	
_____ = _____ _____ = _____		

[veRBAL deSCRIPTION]	[Model]															
[eXPRESSION]	<table border="1"> <tr> <td></td> <td>x</td> <td>x</td> <td></td> <td></td> </tr> <tr> <td>1</td> <td>-1</td> <td>-1</td> <td>-1</td> <td>-1</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>-1</td> <td>-1</td> </tr> </table>		x	x			1	-1	-1	-1	-1	1	1	1	-1	-1
	x	x														
1	-1	-1	-1	-1												
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**i've got it!**

What concepts can I ace on the test?

**HELP!**

What concepts do I need to study?

