NAME _____ DATE _____ PERIOD _____

Chapter 7 Practice test

Write the correct answer in the blank at the right of each question.

1. Which expression is equivalent to $\frac{1}{4}(4 + 9)$?

A. $\frac{1}{4}(13)$ **C.** $\frac{1}{4}(4) + \frac{1}{4}(9)$

B. $\left(\frac{1}{4} + 13\right) \bullet \left(\frac{1}{4} + 13\right)$ **D.** $\left(\frac{1}{4} + 4\right) \bullet \left(\frac{1}{4} + 9\right)$

1. C

2. $-\frac{2}{5}(15 - 5)$ is equivalent to which value?

F. -6 **G.** -4 **H.** 2 **J.** 8

2. G

$-\frac{2}{5}(15-5)$

$-\frac{2}{5}\left(\frac{10}{1}\right) = -\frac{20}{5} = -4$

3. Which expression has the same value as $-4(-5 + x)$?

A. $-4(-5) + (-4)x$ **C.** $(-4 - 5) \bullet (-4 + (-x))$

B. $-4(5) - 4x$ **D.** $(4 - 5) \bullet (-4 - x)$

3. A

4. Which of the following expressions can be written as $\frac{1}{6}(x + y)$?

F. $\frac{1}{6}xy$ **H.** $\frac{x}{6} \bullet \frac{y}{6}$

G. $\frac{1}{6}xy + \frac{1}{6}yx$ **J.** $\frac{1}{6}x + \frac{1}{6}y$

4. J

5. Admission to an art museum is \$12 for students. Which expression can be used to mentally compute the total cost of admission tickets for 60 students?

A. $60(10 + 2)$ **C.** $6(12 + 10)$

B. $12 \bullet 2 + 60 \bullet 10$ **D.** $10(30 + 30)$

$60(12)$

$60(10) + 60(2)$

$6(10+2)$

5. A

6. Which expression has a coefficient of 0.5?

F. $-0.5x$ **H.** $4 + 0.5x$

G. $-0.5x + 0.25x$ **J.** $4 + 0.5$

-0.5 COEFFICIENT

CONSTANT

6. H

7. Which of the following expressions correctly combines like terms?

A. $4x + 7 + 2x - 4y = 6x + 3y$ $7 - 4y \neq 3y$

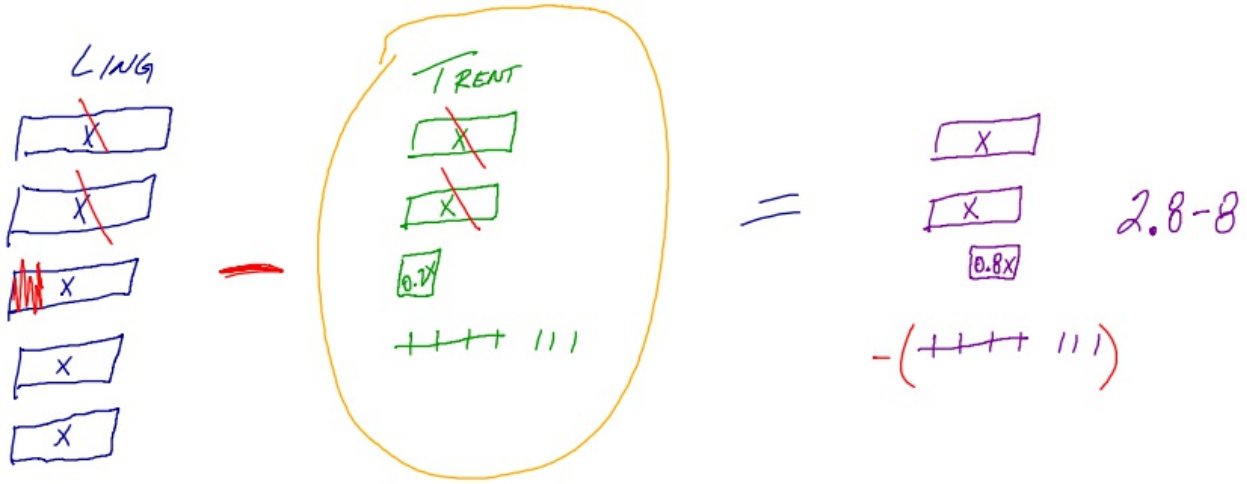
B. $2x + 7y + 2x - 4y = 4x + 3y$

C. $2x + 7y + 2x - 4 = 4x + 3y$ $7y - 4 \neq 3y$

D. $4x + 7y + 2x + 4y = 6x + 3y$ $7y + 4y \neq 3y$ $11y$

7. B

14. The expression $(2.2x + 8)$ represents the number of miles Trent jogged during a race, and $5x$ represents the number of miles that Ling jogged during the same race, in x hours. Write an expression to show how many more miles Ling jogged than Trent. $5x - (2.2x + 8)$



$(x+8)+x=2x+8$

8. Mateo and Haley both collect coins. Mateo has 8 more coins in her collection than Haley. Write an expression that represents the total number of coins in both collections? HALEY = C, MATEO = C + 8

8. $2C+8$

9. Bradley rents a fishing boat for the day. The total cost for gasoline is represented by the expression $3.25m + 15$. What is the constant in the expression?

9. 15

10. A triangle has side lengths of $(4x - 10)$ units, $(2x + 6)$ units, and $5x$ units. What is the perimeter of the triangle?

X	CONST
4X	-10
2X	+6
5X	∅

$11x+(-4)$

10. $11x-4$ OR $11x+(-4)$

11. The acute angle measures of a triangle are $(x + 25)°$, $(x - 5)°$, and $(2x - 40)°$. What are the angle measures of the triangle?

11. $45°, 60°, 75°$

12. What is the GCF of $100xyz$ and $25xz$?

$25xz = 5 \cdot 5 \cdot x \cdot z$

$100xyz = 5 \cdot 5 \cdot 2 \cdot 2 \cdot x \cdot y \cdot z$

12. $25xz$

13. Which of the following expressions cannot be factored?

A. $\frac{1}{2}xy + x$ **C.** $\frac{x}{4} + \frac{y}{2}$

B. $4x + y$ **D.** $4xy + 4$

13. B

14. The expression $(2.2x + 8)$ represents the number of miles Trent jogged during a race, and $5x$ represents the number of miles that Ling jogged during the same race, in x hours. Write an expression to show how many more miles Ling jogged than Trent. $5x-(2.2x+8)$

14. $2.8x-8$

15. The area of a rectangular hot tub cover is $(8x - 2)$ square units. What are possible dimensions of the hot tub cover?

15. $4x-1$

$2 \overline{)20}$ 10

$2 \overline{)8x-2}$ $4x-1$

11. The acute angle measures of a triangle are $(x + 25)°$, $(x - 5)°$, and $(2x - 40)°$. What are the angle measures of the triangle?

$(x+25)+(x-5)+(2x-40)=180$

$4x+(-20)=180$

$+20 \quad +20$

$\frac{4x}{4} = \frac{200}{4}$

$x = 50$

x	CONSTANTS
x	$+25$
x	-5
$2x$	-40

$4x + (-20)$

↑ AND

$(50+25) = 75$ $\quad (50-5) = 45$ $\quad (2(50)-40)$

$100 - 40$

60

$\begin{array}{r} 1 \\ 75 \\ 45 \\ 60 \\ \hline 180 \end{array}$