8th Grade FSA 2018-2019

Review

1.Which expression is equivalent to $m - 0.8m$

A. 0.20 times m

B. 0.80 times m

C. 0.20 less than m

D. 0.80 less than m

2. BJ's Wholesale earns a $0.38 profit for each orange that it sells and a $0.38 profit for each strawberry that it sells. Which expression(s) show(s) BJ's total profits from selling oranges (a) and strawberries (b)? Select all that apply.

A. 0.38(ab)

B. 0.38(a + b)

C. 0.38a + 0.38b

D. 0.38 + a + 0.38 + b

E. 0.76(ab)

F. 0.76(a + b)

3. The expression $7a + 14b$ represents the sum of Alfredo and Bianca's total monthly wages, where **a** represents the number of hours Alfredo worked and **b** represents the number of hours Bianca worked. What is another way to write the expression, and what can you conclude from rewriting it in this way?

A. $7(a + 2b)$ Alfredo's hourly wage is 2 times Bianca's.

B. $7(a + 2b)$ Bianca's hourly wage is 2 times Alfredo 's.

C. $14(7a + b)$ Alfredo's hourly wage is 7 times Bianca's.

D. $14(a + 7b)$ Bianca's hourly wage is 7 times Alfredo 's.

4. Thalia and Sabrina both get paid an equal hourly wage of $11 per hour. This week, Thalia made an additional $43 in overtime. Select the expressions below that represent the weekly wages of both if x = the number of hours Thalia worked this week and y = the number of hours Sabrina worked this week.

A. 11x – 11y – 43

B. 11x + 11y + 43

C. 11(x – y) + 43

D. 11(x + y) + 43

E. (11x + 43) + (11y)

F. (11x + 43) – (11y)

5. Select the expression that is equal to (13x + 6) – (7x – 10).

A. 10x – 4

B. 20x + 16

C. 6x – 4

D. 6x + 16

6. Which of the following expressions are equivalent to 12x + 16 – 6? Select all that apply.

A. 22x

B. 28x – 6

C. 12x + 10

D. 2(6x + 5)

E. 2(6x + 16 – 6)

F. 4(3x + 4) – 6

7. Select the expression equivalent to (7.2x + 2.4) + (–3.1x + 7).

A. –4.1x + 9.4

B. 4.1x + 9.4

C. –10.3x + 9.4

D. 10.3x + 9.4

8. Select the option(s) that are equivalent to 5(2x + 2).

A. 10x + 10

B. 2(5x + 5)

C. 5(2x) + 2

D. 2x + 5 + 2x + 5 + 2x + 5

E. 10(x) × (5 + 2)

9. Which expression is equivalent to the expression $\frac{1}{5}y - \frac{1}{6}(y + 3)$

a. $\frac{11}{30}y - \frac{1}{2}$

b. $\frac{1}{30}y - \frac{1}{2}$

c. $-\frac{11}{30}y + \frac{1}{2}$

d. $\frac{1}{6}y - 2$

10. What is the result when $\frac{5}{8}y + 3\frac{1}{5}$ is subtracted from $3\frac{1}{2}y + \frac{1}{6}$

a. $-2\frac{7}{8}y + 3\frac{1}{30}$

b. $2\frac{7}{8}y - 3\frac{1}{30}$

c. $1\frac{7}{8}y - 3\frac{5}{30}$

d. $2\frac{5}{8}y - 1\frac{1}{30}$

11. Victoria has read the first 11 pages of a 180-page book. She plans to read 13 pages per day until she finishes. Which of these shows the equation and solution for **T**, the number of days it will take Victoria to finish her book?

a. $11 + 13T = 180; \quad T =$13

b. $13 + 13T = 180; \quad T =$11

c. $180 - 13T = -11; \quad T =$13

d. $11 + 11T = 180; \quad T =$16

14. **Which of the following word problems can be solved using the equation 4(*x* + 10) = 80?**

A. Four classmates share a box of cupcakes. After each person receives x cupcakes, there are still 10 cupcakes left in the box. If there were initially 80 cupcakes in the box, how many cupcakes did each of the classmates receive?

B. Aidan has four bags of marbles. Each bag originally has x marbles. After taking out 10 marbles from each bag, there is a total of 80 marbles in the bags. How many marbles were originally in each bag?

C. A square has a side length of x inches. Each side of the square will be increased by 10 inches to create a larger square. If the larger square has a perimeter of 80 inches, what is the side length, in inches, of the original square?

D. Carlos has 10 stacks of Pokemon cards. Each stack originally has x cards. He adds 4 cards to each stack giving him a total of 80 trading cards. How many Pokemon cards did Carlos originally have?

15. Akif owns a chocolate shop. He has fixed monthly expenses of $3600. He also spends $1. 50 for each 8-ounce bag of chocolate kisses that he sells (x). During the month of February, his total costs were $12,000. Which of the following equations represent his total costs for February? Select all that apply.

A. $1.50(2400 + x) = 12{,}000$

B. $1.50(3600 + x) = 12{,}000$

C. $1.50 + 3600x = 12{,}000$

D. $3600 + 1.50x = 12{,}000$

E. $(3600 + 1.50)x = 12{,}000$

F. $3601.50 + x = 12{,}000$

16. Edwin has $20 in savings at the beginning of Summer. He then decides to save $9 every week. Which inequality represents the solution that describes how many weeks (*w*) it will take Edwin to accumulate more than $83?

A. $w \leq 7$

B. $w > 7$

C. $w < 13$

D. $w \geq 13$

17. Libby has a monthly cell phone plan that has a fixed charge of $15 per month plus $0.20 per text message. Libby wants to spend no more than $65 per month on her cell phone. Which inequality represents the number of text messages, x, that Libby can use in a month?

A. $x \leq 250$

B. $x \leq 280$

C. $x \leq 400$

D. $x \leq 520$

18. Party Poopers charges $150.00 to rent their building for events and $15.50 per person to attend. Henry has $1000.00 to spend for a Christmas party.

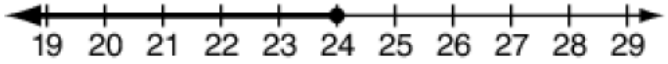
Which inequality can Henry use to find *x*, the number of people he can

invite?

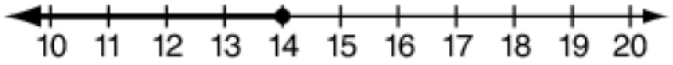
A. $150 + 15.50 \leqslant 1000$
B. $150 + 15.50X \geq 1000$
C. $150X + 15.50 \geq 1000$
D. $150 + 15.50X \leqslant 1000$

19. The amount of money Thalia saved can be modeled by the expression $50 + 10S \geq 190$, where **s** is the number of days she has been saving. Which number line shows how days she has been saving?

A.



B.



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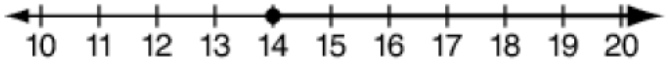
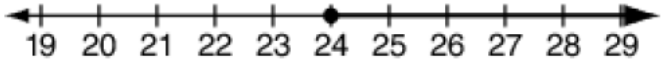


D.



20. Yanira collects Pokemon cards. She wishes to grow her collection to at least 4000 cards. She currently has 2200 cards. Her favorite type of cards has 15 cards per package. Which inequality and solution represent the number of packages of cards that Yanira wishes to buy? Select two that apply.

A. $p + 2200 \geq 4000$

$p \geq 2200$

B. $25p + 2200 \geq 4000$

$p \geq 72$

C. $2200 + 25p \geq 4000$

$p \geq 280$

D. $34000 \leq 2200 + 25p$

$72 \leq p$

E. $4000 \leq 2200 + 25p$

$72 \geq p$

F. $4000 \leq 25p + 2200$

$280 \leq p$