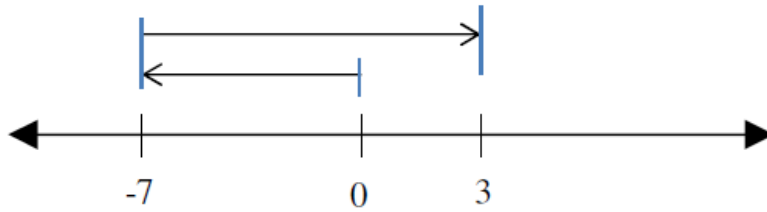


1

Which expression is represented by the model below?



- A.  $-7+0$     B.  $-7+7$     C.  $-7+3$     D.  $-7+10$

2

Solve  $4x + 8 = 52$ 

- a) 5  
b) 11  
c) 15  
d) 21

3

$$-1\frac{3}{5} * \left(-\frac{1}{4}\right) =$$

- A.  $-\frac{2}{5}$     B.  $\frac{2}{5}$     C.  $-1\frac{3}{20}$     D.  $1\frac{3}{20}$

4

Which equation is true?

- A.  $\frac{5}{8} = -\left(\frac{-5}{-8}\right)$   
B.  $\frac{-3}{-4} = -\frac{3}{4}$   
C.  $-\left(\frac{12}{-17}\right) = \frac{12}{17}$   
D.  $\frac{9}{-13} = -\left(\frac{-9}{13}\right)$

- 5 While sledding, Alex climbed  $\frac{3}{4}$  of the way up the hill. He fell and slid backwards  $\frac{1}{6}$  of the hill. What fraction of the hill does Alex still have left to climb?

A.  $\frac{5}{12}$

B.  $\frac{7}{12}$

C.  $\frac{14}{24}$

D.  $\frac{11}{12}$

- 6 On Monday, Barry had \$153.75 in his bank account. On Tuesday, he withdrew \$71.00 from his account. After depositing \$292.50 on Wednesday, how much money did Barry have in his account?

A. \$67.75

B. \$209.75

C. \$375.25

D. \$517.25

- 7  $6x - 4 - (2x + 8)$  is equivalent to:

A.  $4(x - 12)$

B.  $4(x + 1)$

C.  $4(x - 3)$

D. None of these

- 8 Which of the expressions below are equivalent to  $-2(x + 5) + 9(x + 5)$

A.  $7x + 35$

B.  $7x + 55$

C.  $-7x + 35$

D. None of these

- 9 A rectangular rug is three times longer than it is wide. Which expression could **NOT** be used to represent the rug's perimeter in terms of its width ( $w$ )?

A.  $3w + w$

B.  $4w + 4w$

C.  $2(3w) + 2w$

D.  $2w + 6w$

10

Diana had a coupon for  $c$  dollars off of each box of crackers. Diana bought 2 boxes of crackers for  $4.50 - c$  dollars each. She also bought 8 cans of soup for  $s$  dollars each. The total amount, in dollars, she spent on the cans of soup and boxes of crackers is represented by the expression below.

$$2(4.50 - c) + 8s$$

Which expression also represents the total amount, in dollars, she spent?

- A.  $6.50 - 2c + 8s$
- B.  $6.50 - 2c + 10s$
- C.  $9 - c + 8s$
- D.  $9 - 2c + 8s$

11

What is the value of the expression  $(x - y)^2$  when  $x = 5$  and  $y = -1$ ?

- A. 8
- B. 12
- C. 16
- D. 36

12

Briana biked 2.82 miles on Monday, 3.75 miles on Wednesday, and 2.13 miles on Friday. Briana estimated the total distance she biked. Which statement correctly compares an estimate of the total distance with the exact total distance that Briana biked?

- A. The estimate  $2 + 3 + 2$  is smaller than the exact answer but is within 1 mile.
- B. The estimate  $2 + 4 + 2$  is greater than the exact answer but is within 1 mile.
- C. The estimate  $3 + 4 + 2$  is smaller than the exact answer but is within 1 mile.
- D. The estimate  $3 + 4 + 2$  is greater than the exact answer but is within 1 mile.

13

Vincent bought a 25-pound bag of rice. He cooked 6.25 pounds of the rice. He stored the rest of the rice in  $3\frac{3}{4}$ -pound portions. What is the maximum number of  $3\frac{3}{4}$ -pound portions he stored?

- A. 2.5
- B. 3.4
- C. 5.0
- D.  $6.\bar{6}$

14

Max is solving the equation  $3x - 2 = 10$

Which of the following are correct steps to find the solution?

- A. Divide both sides by 3. Then add 2 to both sides.
- B. Add 2 to both sides. Then divide both sides by 3.
- C. Subtract 2 from both sides. Then divide both sides by 3.
- D. Multiply both sides by  $\frac{1}{3}$ . Then subtract 2 from both sides.

15

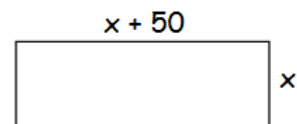
Which would **NOT** be an appropriate first step to solve this equation:

$$10 = 2(k - 5)$$

- A. Add 5 to each side.
- B. Divide each side by 2.
- C. Multiply  $(k - 5)$  by 2.
- D. None of these steps are appropriate.

16

The length of a rectangle is 50 cm. longer than the width. If the perimeter of the rectangle is 220 cm., find the width and length.



- A. 85 cm
- B. 30 cm
- C.  $56.\bar{6}$  cm
- D. No solution

17

Chico is saving for new shoes that cost \$87. He already has \$9 saved, and he will save the same amount each week. Chico wants to buy the shoes in 6 weeks. The inequality shown below can be used to determine  $x$ , the amounts that Chico can save each week and still buy the new shoes in 6 weeks.

$$9 + 6x \geq 87$$

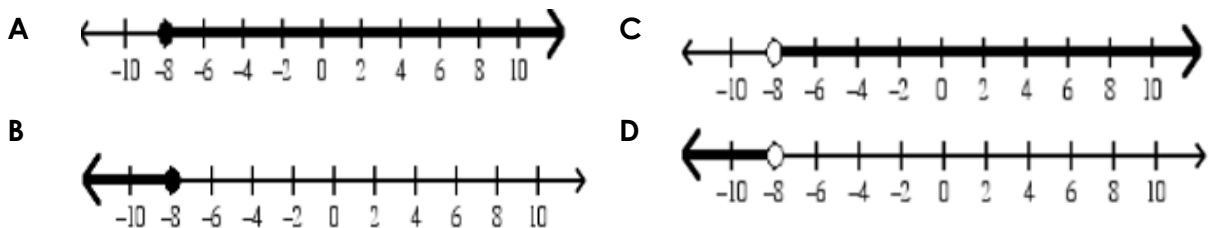
What is the least amount Chico can save each week and still buy the new shoes in 6 weeks?

- A. \$9
- B. \$13
- C. \$15
- D. \$16

18

Graph the solutions of the inequality on a number line.

$$-8 < m$$



19

Carolina purchased different types of halogen light bulbs for the apartment building where she works. The information about the bulbs she purchased is shown in the table below.

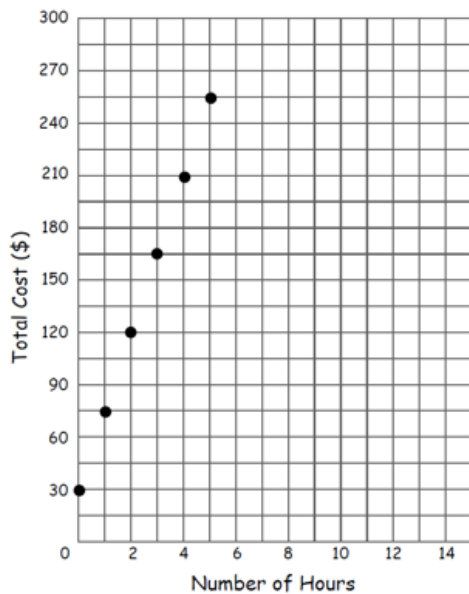
**HALOGEN LIGHT BULBS PURCHASED**

Type of Light Bulb	Number Purchased	Total Cost
10-Watt Clear	12	\$ 18.60
13-Watt Warm White	9	\$16.65
20-Watt Capsule Bulb	20	\$ 36.00
34-Watt Cool White	10	\$16.00

Which type of light bulb costs the **least amount** per light bulb?

- A. 10-Watt Clear    B. 13-Watt Warm White    C. 20-Watt Capsule    D. 34-Watt

20



Identify as Proportional or Non-Proportional. If proportional, identify the constant of proportionality.

- A. Proportional;  $k = 3$   
 B. Proportional;  $k = 60$   
 C. Proportional;  $k = 75$   
 D. Non-proportional

21

The sides of a rectangular field are in the ratio 3 : 7.  
If the larger side of the field is 42 m then its smaller side is:

- A. 18 m
- B. 98 m
- C. 4.2 m
- D. 6 m

22

Solve for n.  $\frac{3n}{10} = \frac{9}{5}$

- A.  $n = 6$
- B.  $n = 11.25$
- C.  $n = 30$
- D.  $n = 5$

23

If you can buy 24 seedless watermelons for \$45.20, then how many can you buy with \$11.30?

- A) 2      B) 6      C) 4      D) 21

24

This year the school basketball team spent \$600 on uniforms. Next year they will spend \$960. What is the percent of increase?

- A. 50%
- B. 60%
- C. 200%
- D. 24%

25

Mrs. Taylor bought a water tube to pull behind her boat. The tube cost \$87.00 and 6% sales tax was added at the register. Mrs. Taylor gave the cashier ten \$10 bills. How much change should she have received?

- A. \$5.22
- B. \$94.78
- C. \$7.78
- D. \$92.22

Key:

Item #	Correct Choice
1	D
2	B
3	B
4	C
5	A
6	C
7	C
8	A
9	A
10	D
11	D
12	D
13	C
14	B
15	A
16	B
17	B
18	C
19	A
20	D
21	A
22	A
23	B
24	B
25	C

Mid-Year Summative Assessment      7<sup>th</sup> Grade Fayette County Public Schools  
**Assessment Matrix- 7<sup>th</sup> Grade Mid-Year Assessment**

Standard Number	Standard	Item #	Mastery
<b>7.NS.1</b> (Unit 7A)	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	1	
<b>7.NS.2</b> (Unit 7A)	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	3, 4	
<b>7.NS.3</b> (Unit 7A)	Solve real-world and mathematical problems involving the four operations with rational numbers.	5, 6	
<b>7.EE.A.1</b> (Unit 7B)	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	7, 8	
<b>7.EE.A.2</b> (Unit 7B)	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	9, 10	
<b>7.EE.B.3</b> (Unit 7B)	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	11, 12, 13	
<b>7.EE.B.4.A</b> (Unit 7B)	Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.	2, 14, 15, 16	

<b>7.EE.B.4.B</b> (Unit 7B)	Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.	17, 18	
<b>7.RP.A.1</b> (Unit 7C)	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	19	
<b>7.RP.A.2</b> (Unit 7C)	Recognize and represent proportional relationships between quantities.	20, 21, 22, 23	
<b>7.RP.A.3</b> (Unit 7C)	Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	24, 25	