NAME_____ PERIOD_____ DATE _____

2023-2024 November DCA Math 7

(TAKE HOME TEST) (Do Over)

Directions: The correct answers are marked on this paper. Your job is to show the work that leads up to the correct answer and/or explain how that answer was calculated. This will increase your score by 50%.

1 Which expressions are equivalent to $-2(2p+10)+4p$? Select **two** answers below.

- A -10
- ● $-4p+(-20)+4p$
- C $-20-2p$
- ● -20
- E $-4p-20+8p$

5 Mr. Pratt spent $165 to attend a college football game.
- Twenty percent of this cost was for a parking pass.
- He spent the remainder of the money on two tickets for the game.

What was the price per ticket?

- A $16.50
- B $33.00
- ● $66.00
- D $82.50

2 Which situation can be represented by the equation $1\frac{1}{4} \times 6 = 7\frac{1}{2}$?

- A It took Calvin $1\frac{1}{4}$ hours to run 6 miles. He ran $7\frac{1}{2}$ miles per hour.
- ● Sara read for $1\frac{1}{4}$ hours every day for 6 days. She read for a total of $7\frac{1}{2}$ hours.
- C Matthew addressed $1\frac{1}{4}$ envelopes in 6 minutes. He addressed $7\frac{1}{2}$ envelopes per minute.
- D It took Beth $1\frac{1}{4}$ minutes to paint 6 feet of a board. She painted a total of $7\frac{1}{2}$ feet of the board.

3 The scale for a map to actual distance is 2 cm to 100 mi. The driving distance on a map between Gulfport, Mississippi, and Jackson, Mississippi, is 3.2 cm. What is the actual distance, in miles, between Gulfport and Jackson?

- A $40\ mi$
- B $80\ mi$
- ● $160\ mi$
- D $320\ mi$

4 On Mondays, a coffee shop offers its customers a 25% discount on all coffee purchases. The coffee shop usually charges c dollars for a flavored coffee. The expression below can be used to determine the cost of a flavored coffee on Mondays.

$$c-0.25c$$

Which expression could also be used to determine the cost of a flavored coffee on Mondays?

- A $0.25c$
- ● $0.75c$
- C $1.25c$
- D $1.75c$

6 A cell phone company is giving a 20% discount on all phone accessories. Which expressions can be used to find the sale price of an item with an original price of x dollars?

Select the **two** that apply.

- $x - 0.2x$
- B $-20x$
- C $0.2x$
- D $100 - 20x$
- $0.8x$

7 Which decimal is equivalent to $\frac{8}{99}$?

- A 0.080
- $0.\overline{08}$
- C 0.08
- D $0.\overline{8}$

8 Tyler solved the following expression:

$\frac{1}{3}(9 - 12x) - 4x$

Step 1: $\left(\frac{1}{3}\right)\left(\frac{9}{1}\right) - \left(\frac{1}{3}\right)\left(\frac{12}{1}x\right) - 4x$

Step 2: $3 - 4 - 4x$

Step 3: $-1 - 4x$

However Tyler did not have the correct answer. Identify Tyler's mistake.

- A He multiplied the fractions incorrectly.
- B He forgot to multiply $\frac{1}{3}$ by $-4x$.
- He forgot to bring down the x when he multiplied $\left(\frac{1}{3}\right)\left(\frac{12}{1}x\right)$
- D He subtracted $3 - 4$ incorrectly.

9 Which equation is true?

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

10 A square has a perimeter of $12x + 2$. What is the lenth of one side?

- A $10x$
- B $14x$
- $3x + \frac{1}{2}$
- D $3x + 2$

11 A scale drawing of a rectanguler park is shown below.

The scale is $1\ cm = 25\ m$.

Which statement explains how to find the actual dimensions of the park in meters?

- A Add 25 to each dimenson of the rectangle in the scale drawing.
- B Multiply each dimension of the rectangle in the scale drawing by 1 .
- Multiply each dimension of the rectangle in the scale drawing by 25 .
- D Add 25 to the product of the dimensions of the rectangle in the scale drawing.

12 Use the expression below to answer the question.

$(2t - 8) - \frac{1}{2}(9 - 4t) + \frac{5}{2}$

Which expression is equivalent to the one shown?

- A $-2t - 1$
- B $-2t - 10$
- C $4t - 1$
- $4t - 10$

13 A scale drawing of a billboard shows a rectangle with a length of $10\ in$ and a width of $5\ in$. The area of the real billboard is $200\ square\ feet$. What is the scale factor used to make the drawing?

(A) $1\ in\ =\ 1ft$

(B) $1\ in\ =\ 2ft$

(C) $1\ in\ =\ 4ft$

(D) $1\ in\ =\ 12\ ft$

14 The width of a rectangle is $\frac{2}{3}$ of the length. What is the perimeter of the rectangle when the width is 12 inches?

(A) $18\ in$

(B) $24\ in$

(C) $30\ in$

(D) $60\ in$

15 Melissa uses $\frac{1}{3}$ cup of raisins to make 3 cups of trail mix. Using the same proportion, how many cups of raisins would Melissa need to make 12 cups of trail mix?

(A) $1\frac{1}{3}$

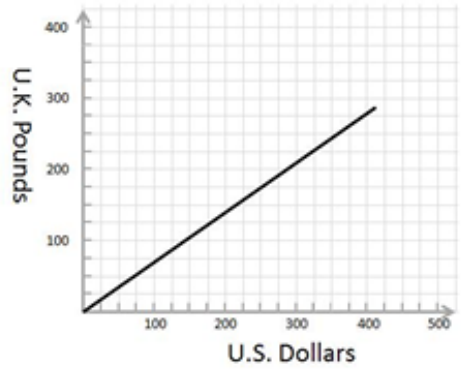
(B) $2\frac{2}{3}$

(C) $3\frac{1}{3}$

(D) $4\frac{2}{3}$

16 The point (200, 150) lies on the graph.

Which equation matches the graph below?



(A) $y = 75x$

(B) $x = \frac{3}{4}y$

(C) $x = 75y$

● $y = \frac{3}{4}x$

17 Jamie's paycheck was $482.60. She put $\frac{3}{10}$ of her paycheck into a savings account and $\frac{1}{2}$ of what was left to pay bills. How much money does Jamie have left from her paycheck after putting money into her savings account and paying bills? (Type your answer as a decimal.)

Answer: $168.91

18 Your grade on a mathematics quiz was a 95%. There were 60 points on the quiz. How many points did you get?

(A) 55 points

● 57 points

(C) 58 points

(D) 59.05 points