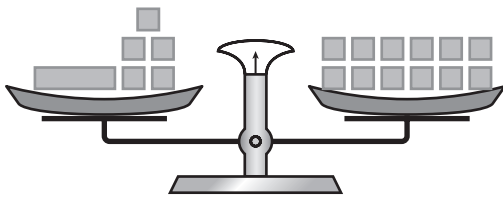


Standardized Test

Name _____ Date _____

- Which is a solution to the equation $4.82y = 156.891$?
 - $y = 161.711$
 - $y = 32.55$
 - $y = 152.071$
 - $y = 756.21462$
- Which is a solution to the equation $8\frac{5}{6} = x + 5\frac{1}{3}$?
 - $x = 14\frac{1}{6}$
 - $x = 13\frac{2}{3}$
 - $x = 3\frac{2}{3}$
 - $x = 3\frac{1}{2}$
- For the inequality $x + 1 \geq 4$, which solution set satisfies the inequality?
 - $\{0, 1, 2\}$
 - $\{0, 2, 4\}$
 - $\{3, 4\}$
 - $\{2, 4\}$
- Which is a solution of the inequality $z + 2 < 8$?
 - $z < 4$
 - $z < 6$
 - $z = 6$
 - $z < 10$
- The diagram shows a pan balance.



How many squares are equivalent to one rectangle?

- 7 squares
- 6 squares
- 5 squares
- 4 squares

6. Which equation is represented by the bar model shown?

x	x	x
6	6	6

a. $x = 1$

b. $x + x + x = 1$

c. $x = 6 + 6 + 6$

d. $x + x + x = 6 + 6 + 6$

7. Which bar model represents the equation $\frac{1}{2}x = 3$?

a.

x	
$\frac{1}{2}x$	$\frac{1}{2}x$
3	3

b.

x		
$\frac{1}{2}x$	$\frac{1}{2}x$	$\frac{1}{2}x$
3	3	3

c.

$\frac{1}{2}x$		$\frac{1}{2}x$	
x	x	x	x
3	3	3	3

d.

3		3	
x	x	x	x
$\frac{1}{2}x$	$\frac{1}{2}x$	$\frac{1}{2}x$	$\frac{1}{2}x$

8. In the solution to the equation shown, what property allows you to transform from one step to the next?

$$\frac{4}{5}x = 1$$

$$\frac{5}{4} \cdot \frac{4}{5}x = 1 \cdot \frac{5}{4}$$

- a. Addition Property of Equality
- b. Subtraction Property of Equality
- c. Multiplicative Inverse Property
- d. Multiplicative Identity Property

10. Which inverse operation is needed to isolate the variable in the equation $4.75x = 24.7$?

- a. Multiply both sides by 4.75.
- b. Divide both sides by 4.75.
- c. Subtract 4.75 from both sides.
- d. Add 4.75 to both sides.

12. Kyle lives in a state that has a 6% sales tax. If c represents the cost of an item and t represents the sales tax on the item, which equation expresses the relationship between these two variables?

- a. $t = 6c$
- b. $t = 0.6c$
- c. $t = 0.06c$
- d. $t = c + 0.06$

9. Which inverse operation is needed to isolate the variable in the equation $r + 8.9 = 17.4$?

- a. Add 8.9 to both sides.
- b. Subtract 8.9 from both sides.
- c. Add 17.4 to both sides.
- d. Subtract 17.4 from both sides.

11. Which two methods can be used to solve the equation $\frac{5}{7}n = 8\frac{3}{5}$?

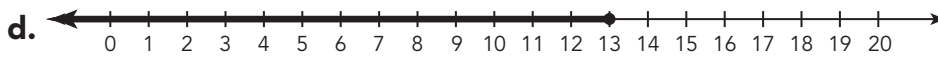
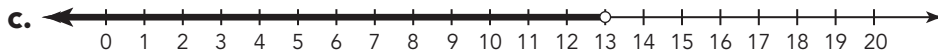
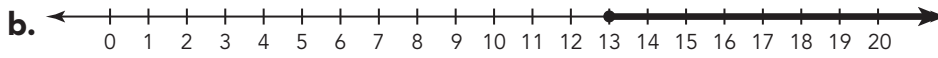
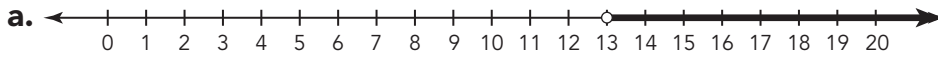
- a. Multiply both sides by $\frac{5}{7}$ or divide both sides by $\frac{7}{5}$.
- b. Divide both sides by $\frac{5}{7}$ or multiply both sides by $\frac{7}{5}$.
- c. Add $\frac{5}{7}$ to both sides or subtract $\frac{7}{5}$ from both sides.
- d. Subtract $\frac{5}{7}$ to both sides or add $\frac{7}{5}$ to both sides.

13. Which inequality is represented by the graph?

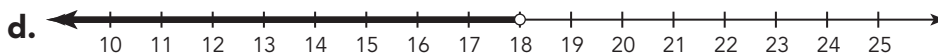
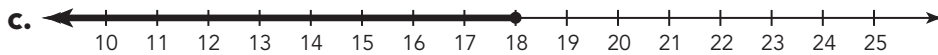
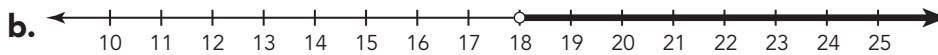
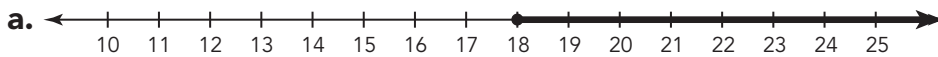


- a. $x < 46$
- b. $x > 46$
- c. $x \neq 46$
- d. $x \leq 46$

14. Which line represents the inequality $x \geq 13$?



15. In order to vote, an individual must be at least 18 years old. Which inequality represents the situation described?



- 16.** If Maria drove 261 miles in $4\frac{1}{2}$ hours, what was her average speed? Select an equation and solution for this situation.
- a. $4\frac{1}{2} \cdot t = 261$
 - b. $261 \cdot t = 4\frac{1}{2}$
 - c. 52.2 miles per hour
 - d. 58 miles per hour
- 17.** In a card game, players score 8 points for each play called a meld. Select an expression that represents the points earned. What does your variable represent?
- a. $8x$
 - b. $8 + x$
 - c. x is the total number of points
 - d. x is the total number of melds
- 18.** You take music lessons that cost \$45 a month plus an additional amount for lessons during the month. If you spent \$325 in music lessons in one month, how much did you spend on lessons? Select the equation and the solution.
- a. $45 + n = 325$
 - b. $45n = 325$
 - c. \$280
 - d. \$7.22
- 19.** Madeline bought a hybrid car that averages 46 miles per gallon. How much gas will she need for a 350-mile trip? Select the equation and the solution.
- a. $350 \cdot 46 = n$
 - b. $46n = 350$
 - c. approximately 7.61 gallons
 - d. approximately 8.75 gallons
- 20.** A flower shop is creating arrangements that need exactly 3 roses each. There are 23 roses available. How many arrangements can the flower shop make? Then select your reasoning.
- a. 7
 - b. 8
 - c. the remainder is 2, so you can make another arrangement
 - d. the remainder is 2, so you do not have enough roses for another arrangement