



Lesson Practice

Choose the correct answer.

1. Which is the solution to $2f = 32$?

- A. 12
- B. 14
- C. 16
- D. 18

2. Which step should be taken to isolate the variable in the following equation?

$$7d = 49$$

- A. Add 7 to both sides of the equation.
- B. Subtract 7 from both sides of the equation.
- C. Multiply both sides of the equation by 7.
- D. Divide both sides of the equation by 7.

3. What is the value of c in the following equation?

$$29 + c = 62$$

- A. 33
- B. 43
- C. 81
- D. 91

4. What is the value of j in the following equation?

$$j - 87 = 165$$

- A. 78
- B. 88
- C. 242
- D. 252

5. What is the value of n in the following equation?

$$22n = 418$$

- A. 12
- B. 14
- C. 19
- D. 24

6. What is the value of k in the following equation?

$$\frac{1}{5}k = 5$$

- A. 0
- B. 1
- C. 10
- D. 25

7. What is the value of a in the following equation?

$$3a = 15$$

- A. 1
- B. 5
- C. 6
- D. 45

8. A music teacher bought 19 recorders. She spent a total of \$57. Each recorder was the same price. The equation $19r = 57$ can be used to find r , the price of each recorder in dollars. What was the price of each recorder?

- A. \$3
- B. \$4
- C. \$38
- D. \$76

9. Trista solved an equation for x . Her solution is shown below.

$$36 + x = 54$$

$$36 + x - 36 = 54 + 36$$

$$x = 90$$

- A. Trista's solution is incorrect. What is the correct value of x ? Show your work.

- B. What error did Trista make?



Lesson Practice

Choose the correct answer.

1. Which equation best represents the relationship between x and y shown in the table?

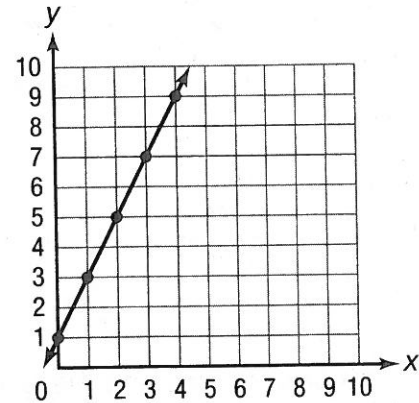
x	0	1	2	3
y	1	5	9	13

- A. $y = x + 1$
B. $y = x \cdot 5$
C. $y = 4x + 1$
D. $y = 5x + 1$
2. Which ordered pair does **not** represent the equation $y = x + 3$?
- A. (1, 4)
B. (3, 9)
C. (12, 15)
D. (18, 21)
3. Which equation represents the relationship between x and y shown in the table?

x	6	12	18	24
y	2	4	6	8

- A. $y = x - 4$
B. $y = 3x$
C. $y = \frac{1}{3}x$
D. $y = \frac{1}{6}x$

4. Which table below best represents the relationship between x and y shown in the graph?



- A.

x	0	1	2	3	4
y	1	3	5	7	9
- B.

x	0	3	5	3	9
y	1	1	2	7	4
- C.

x	1	3	5	7	9
y	0	1	2	3	4
- D.

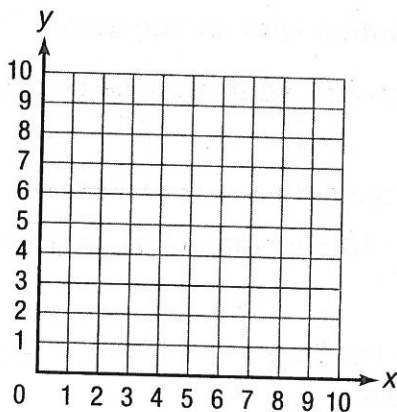
x	0	1	2	3	4
y	0	1	3	5	7

5. Use the equation $y = x - 1$ to answer the questions below.

A. Complete the table of values below for $y = x - 1$. Use the space provided in the second column to show your work.

x	$y = x - 1$	y	(x, y)
3			
5			
7			
9			

B. Graph $y = x - 1$ on the coordinate grid below. Explain in words how you graphed the equation.



 Lesson Practice

Choose the correct answer.

- After Kwan spent \$5 dollars of the money he earned for mowing lawns, he had \$15 left. Let m equal the amount Kwan earned mowing lawns. Which shows the equation that represents the situation and the amount Kwan earned mowing lawns?
 - $m - 5 = 15$; \$20
 - $m + 5 = 15$; \$20
 - $5m = 15$; \$3
 - $\frac{m}{5} = 15$; \$75
- Pete has 4 times as many model cars as Steve. Pete has 24 model cars. Let s equal the number of model cars Steve has. Which shows the equation that represents the situation and the number of model cars Steve has?
 - $\frac{s}{4} = 24$; 96 model cars
 - $24s = 4$; $\frac{1}{6}$ model car
 - $4s = 24$; 6 model cars
 - $s + 4 = 24$; 20 model cars
- Kristin worked a total of 10 hours over two days. She worked 6 hours the first day and b hours the second day. Which shows the equation that represents the situation and the number of hours she worked the second day?
 - $6b = 10$; 1.5 hours
 - $\frac{b}{10} = 6$; 60 hours
 - $b - 6 = 10$; 16 hours
 - $6 + b = 10$; 4 hours
- Patel has 5 less than 4 times as many trophies as Horatio. He has 19 trophies in all. How many trophies does Horatio have?
 - 3
 - 6
 - 71
 - 91

5. A restaurant is offering a \$10-off special per table if three or more dinners are ordered. Four friends each ordered the same dinner and spent a total of \$150. What was the cost of each dinner?
- A. \$13 C. \$35
B. \$30 D. \$40
6. The Downtown Theater has 413 seats, which is 8 more than 3 times as many seats as the Uptown Theater has. How many seats are there in the Uptown Theater?
- A. 135 C. 1,247
B. 405 D. 3,301
7. A boat rental company charges \$25 per hour. A life jacket can be rented for \$10 for the day. Larry spent \$85 in all including the cost of a life jacket rental. How many hours did Larry rent the boat?
- A. 5 hours C. $3\frac{1}{2}$ hours
B. 4 hours D. 3 hours
8. Tristan has 20 less than 3 times as many DVDs as Anna. If Tristan has 55 DVDs, how many DVDs does Anna have?
- A. 25 C. 38
B. 32 D. 145

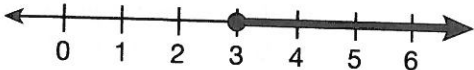

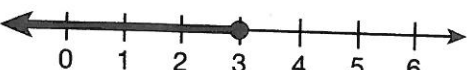

9. Marlene studied 10 minutes more than 4 times as long as Brianna.
- A. What expression can you write to represent the situation? Explain what your variable represents.

- B. How many minutes did Brianna study if Marlene studied for 150 minutes? Show and explain how you found your answer.



Lesson Practice

Choose the correct answer.

- Which inequality best represents this phrase?
a number greater than -1
 - $x > -1$
 - $x < -1$
 - $x \geq -1$
 - $x \leq -1$
- Which inequality best represents this phrase?
a number less than or equal to 0
 - $n = 0$
 - $n < 0$
 - $n \leq 0$
 - $n \geq 0$
- Five friends had lunch together. Their total bill was x dollars, including tax and tip. They shared the cost equally and each friend paid less than $\$10$. Which inequality shows the possible solutions for x , the total amount of the bill?
 - $x > 50$
 - $x < 50$
 - $x \geq 50$
 - $x \leq 50$
- A red block and a blue block are on a scale. The red block weighs 9 ounces. The total weight of both blocks is at most 16 ounces. Which inequality best represents b , the possible weight of the blue block in ounces?
 - $b \geq 7$
 - $b \leq 7$
 - $b \geq 25$
 - $b \leq 25$
- Which number is **not** a solution for the inequality below?
 $\frac{x}{2} \geq 12$
 - 6
 - 24
 - 25
 - 100
- Which graph shows the solution set for this inequality?
 $r + 9 < 12$
 - 
 - 
 - 
 - 

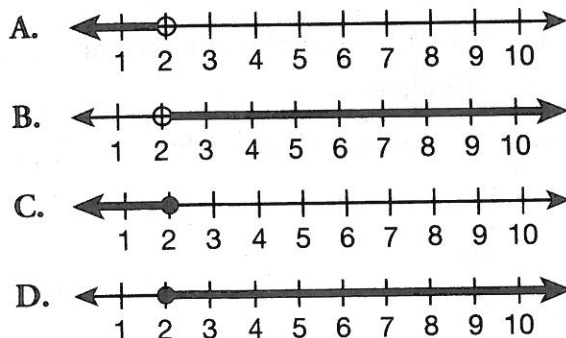
7. Which number is a solution for the inequality below?

$$3n < 18$$

- A. 0
- B. 6
- C. 12
- D. 18

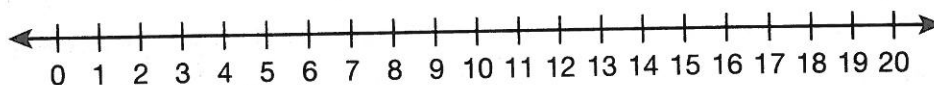
8. Which graph shows the solution set for this inequality?

$$8z \geq 16$$



9. Mrs. Perry hires a landscaper that charges \$15 per hour. The landscaper says that the total charge for the work Mrs. Perry wants done will be at least \$120.
- A. Write an inequality to show h , the number of hours it may take for the landscaper to do the work for Mrs. Perry. Solve the inequality and show your work below.

- B. Graph the inequality on the number line below. Then use the graph to explain if it could take the landscaper 9.5 hours to complete the work for Mrs. Perry.



Domain 3: Cumulative Assessment for Lessons 17–23

1. Which expression represents “subtract a number n from 10, then multiply by 9 cubed”?
- A. $9^3 \times (n - 10)$
 - B. $9^3 + 10n$
 - C. $9^3 - 10n$
 - D. $9^3 \times (10 - n)$
2. What is the value of the expression below when $b = 4$?
- $$7b + 6$$
- A. 34
 - B. 46
 - C. 53
 - D. 80
3. Which expression is equivalent to $5(9 + t)$?
- A. $45t$
 - B. $45 + 5t$
 - C. $45 + t$
 - D. $14t$
4. Which number is a solution for the inequality below?
- $$\frac{x}{4} \geq 20$$
- A. 6
 - B. 16
 - C. 25
 - D. 90
5. Vikram needs to buy 72 juice boxes for a community picnic. At the store, juice boxes are sold in packs of 3 juice boxes each. Which shows the equation that represents the situation and the number of packs of juice boxes Vikram needs to buy?
- A. $\frac{j}{3} = 72$; 216 juice packs
 - B. $j - 3 = 72$; 75 juice packs
 - C. $3j = 72$; 24 juice packs
 - D. $j + 3 = 72$; 72 juice packs
6. Which equation best represents the relationship between x and y shown in the table?
- | | | | | |
|-----|---|---|---|---|
| x | 0 | 1 | 2 | 3 |
| y | 1 | 3 | 5 | 7 |
- A. $y = x + 1$
 - B. $y = 3x$
 - C. $y = 3x - 2$
 - D. $y = 2x + 1$

7. Angelina wants to buy a pair of jeans and a sweater that costs \$38. She does not want to spend more than \$80 for the jeans and the sweater. Which inequality best represents j , the amount that Angelina can spend on the jeans?

- A. $j > 42$
- B. $j \geq 42$
- C. $j < 42$
- D. $j \leq 42$

8. What is the value of y in the following equation?

$$\frac{1}{3}y = 9$$

- A. 3
- B. 9
- C. 27
- D. 81

9. Describe the expression $12 + (n \div 6)$ in words.

10. The equation $y = x - 3$ describes how the variables x and y are related.

A. Complete the table of values below for $y = x - 3$. Show all your work.

x	$y = x - 3$	y	(x, y)
3			
5			
7			
9			

B. Graph $y = x - 3$ on the coordinate grid below.

