For each problem, show your work in the space provided. Write your Final Answer (and the letter answer) on the Answer Sheet provided.

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- 1. Subtract: 3 11
- [A] -8 [B] -14
- [C] 14
- [D] 8

2. What property is illustrated by the fact that  $79(44 + 65) = 79 \cdot 44 + 79 \cdot 65$ ?

3. Multiply:  $-8 \cdot (-72)$ 

- 4. Simplify: -(-3) 6(4 3) [A] -9 [B] -30 [C] -3

- [D] -18

For each problem, show your work in the space provided. Write your Final Answer (and the letter answer) on the Answer Sheet provided.

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- 5. Multiply:  $\frac{8}{3} \cdot \left(-\frac{3}{7}\right)$  [A]  $-\frac{56}{9}$  [B]  $\frac{5}{21}$  [C]  $\frac{8}{7}$

6. Simplify:  $9 \div 3 \cdot 3 + 5 - 4$ 

7. Find the greatest common factor of 110, 260, and 310.

Divide:

8. 
$$\frac{2}{7} \div \frac{14}{3}$$

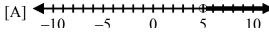
For each problem, show your work in the space provided. Write your Final Answer (and the letter answer) on the Answer Sheet provided.

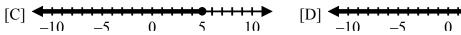
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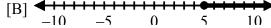
Divide:

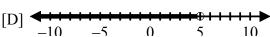
9. 
$$\frac{1}{7} \div \left(-\frac{4}{21}\right)$$

10. Graph: x < 5









11. Solve for *A* in  $B = \frac{5}{8}(A - 8)$ .

[A] 
$$\frac{8B + 64}{5}$$
 [B]  $\frac{8B + 40}{5}$  [C]  $\frac{8B + 59}{8}$  [D]  $\frac{8B + 35}{8}$ 

[B] 
$$\frac{8B + 40}{5}$$

[C] 
$$\frac{8B + 59}{8}$$

[D] 
$$\frac{8B + 35}{8}$$

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12. The width of a rectangle is 27 centimeters. Find all possible values for the length of the rectangle if the perimeter is at least 744 centimeters.

[A]  $x \ge 717 \text{ cm}$ 

[B]  $x \ge 27.56$  cm

[C]  $x \ge 159 \text{ cm}$ 

[D]  $x \ge 345 \text{ cm}$ 

13. Graph:  $-4 \le x < 4$ 

 $[A] \xrightarrow[-10 \quad -5 \quad 0 \quad 5 \quad 10]{}$ 

 $[B] \xrightarrow{-10} -5 \quad 0 \quad 5 \quad 10$ 

14. Evaluate  $x \cdot y$  if x = -6 and y = -3.

For each problem, show your work in the space provided. Write your Final Answer (and the letter answer) on the Answer Sheet provided.

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15. Jonathan's neighborhood has a community garden. Jonathan knows the width of the garden is 18 ft and the area is 666 ft<sup>2</sup>. How many feet of fencing will he need to enclose the garden?

16. Solve: 7(x+8) = 59+7x

17. Evaluate (x + y) if x = -4 and y = 9. [A] 13 [B] 5 [C] -5 [D] -13

18. Is  $\frac{3}{2}$  a solution of the equation 2x-4 = -1?

For each problem, show your work in the space provided. Write your Final Answer (and the letter answer) on the Answer Sheet provided.

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19. Which of the following algebraic expressions has no like terms?

[A] 
$$-6x + 3x - 3$$

[B] 
$$-3y + 2y - 6$$

[A] 
$$-6x+3x-3$$
 [B]  $-3y+2y-6$  [C]  $-6-3x+\frac{1}{5}$  [D]  $-6x-3y+6$ 

[D] 
$$-6x-3y+6$$

20. Simplify by adding like terms: 4x-2y+7x+5y

21. Determine if -4x and 5 are like terms. Answer yes or no.

22. Solve: 
$$4x + 8 = x - 2$$
 [A]  $-\frac{3}{10}$  [B]  $\frac{10}{3}$  [C]  $\frac{3}{10}$  [D]  $-\frac{10}{3}$ 

[A] 
$$-\frac{3}{10}$$

[B] 
$$\frac{10}{3}$$

[C] 
$$\frac{3}{10}$$

[D] 
$$-\frac{10}{3}$$

For each problem, show your work in the space provided. Write your Final Answer (and the letter answer) on the Answer Sheet provided.

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23. A ski-lift that runs to the top of a hill has a rise to run ratio of  $\frac{1}{5}$ . The horizontal distance from the bottom of the lift to the center of the mountain is 8000 ft. How high is the hill?

- 24. Give the ratio of rise to run for the line that contains points (-9, 3) and (-9, -9).
  - [A] -2
- [B]  $\frac{2}{3}$
- [C] 0
- [D] undefined

- 25. In which quadrant does the point (9, -2) lie?
  - [A] quadrant II
- [B] quadrant IV
- [C] quadrant I
- [D] quadrant III

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[1]	
[2]	-
[3]	-
[4]	
[5]	
[6]	-
[7]	-
[8]	-
[9]	-
[10]	
[11]	
[12]	
[13]	
[14]	-
[15]	

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[16]	_
[17]	
[18]	_
[19]	
[20]	_
[21]	_
[22]	
[23]	_
[24]	
[25]	

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[1]	[1] [A]		
[2]	[2] Distributive Property		
[3]	[3] 576		
[4]	[4] [C]		
[5]	[5] <u>[D]</u>		
[6]	[6] 10		
[7]	[7] 10		
[8]	$[8] \frac{3}{49}$		
[9]	[9] $\frac{-\frac{3}{4}}{}$		
[10]	[10] [D]		

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[11] [B]	
[12] <u>[D]</u>	
[13] <u>[C]</u>	
[14] 18	
[15] <u>110 ft</u>	
[16] No solution	
[17] [D]	
[17] <u>[B]</u>	
[18] Yes	
[10] [D]	
[19] [D]	
[20]	

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[21] <u>no</u>	-
[22] [D]	
[23] 1600 ft.	-
[24] [D]	
[25] [B]	