

**NO CALCULATORS** are allowed on Semester Final (Bixler)

1. What is the solution to the inequality  
 $-y + 15 > -(2y + 11)$  ?

[A]  $y > -12$   
[B]  $y < -11$   
[C]  $y > -7$   
[D]  $y > -26$

2. What is the solution for  $n$  in the following inequality?  $-12 + 8n \leq 6(n - 3)$

[A]  $n \leq -3$   
[B]  $n \leq -6$   
[C]  $n \geq 15$   
[D]  $n \geq -4$

3. Which of the following is the equation of a line parallel to the line represented by the equation  $y = \frac{4}{5}x + 10$  and that passes through  $(3, 6)$  ?

[A]  $y = \frac{4}{5}x - \frac{6}{5}$   
[B]  $y = \frac{4}{5}x + \frac{5}{18}$   
[C]  $y = -\frac{5}{4}x + \frac{18}{5}$   
[D]  $y = \frac{4}{5}x + \frac{18}{5}$

4. The graph of which of the following equations is parallel to the graph of the equation below?

$$y = \frac{1}{5}x - 7$$

[A]  $y = -\frac{1}{5}x - 7$   
[B]  $y = -5x + 3$   
[C]  $y = \frac{1}{5}x + 14$   
[D]  $y = -\frac{1}{5}x + 7$

5. Which equation represents the line that passes through the point  $(-3, 4)$  and is perpendicular to the graph of  $y = -\frac{1}{7}x + 2$  ?

[A]  $y = 7x + 25$   
[B]  $y = 7x + 2$   
[C]  $y = -7x - 17$   
[D]  $y = 7x + 4$

6. What is the slope of a line parallel to the graph of  $8x - 6y = 18$  ?

[A]  $-3$   
[B]  $\frac{1}{3}$   
[C]  $\frac{4}{3}$   
[D]  $-\frac{3}{4}$

7. What is the solution for  $n$  in the following inequality?  $-12 + 4n \leq 3(n - 5)$

[A]  $n \leq -3$

[B]  $n \leq 3$

[C]  $n \geq -3$

[D]  $n \geq 3$

8. Which of the following is equivalent to  $3(6y - 7) = 4(y + 9)$  ?

[A]  $9y - 4 = 4y + 13$

[B]  $18y - 21 = 4y + 36$

[C]  $18y - 7 = 4y + 9$

[D]  $18y + 21 = 4y + 36$

9. Which of the following inequalities is equivalent to  $-3(1 - 8x) > 6(2x)$  ?

[A]  $-3 - 24x > 12x$

[B]  $-3 - 8x > 12x$

[C]  $-3 - 11x > 12x$

[D]  $-3 + 24x > 12x$

10. What is the slope of the line perpendicular

to  $y = \frac{2}{3}x + 5$

[A]  $\frac{2}{3}$

[B]  $\frac{3}{2}$

[C]  $-\frac{2}{3}$

[D]  $-\frac{3}{2}$

11. What is the slope of a line parallel to the graph  $4x - 5y = 14$

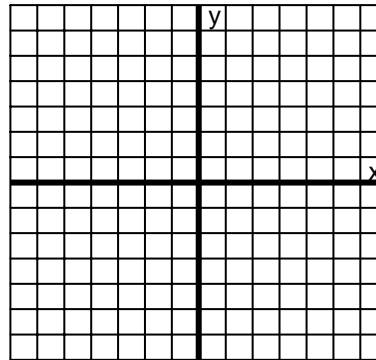
[A]  $\frac{5}{4}$

[B]  $\frac{4}{5}$

[C]  $-\frac{4}{5}$

[D]  $-\frac{5}{4}$

12. Draw the graph represents the following  $x - 3 \leq 0$



13. Which of the following inequalities is equivalent to  $-x < -3$

[A]  $x > -3$

[B]  $x < -3$

[C]  $x < 3$

[D]  $x > 3$

14. What is the solution set for the equation

$|2x + 3| = 5$  ?

[A] 1

[B] -4

[C] -4, 1

[D] 1, 1

15. Which ordered pair represents the y intercept of the equation  $x + 2y = 6$ ?

- [A] (3,0)
- [B] (-3,0)
- [C] (0, -3)
- [D] (0,3)

16. Which order pair represents the x intercept of the equation  $2x-3y = 6$

- [A] (-3,0)
- [B] (3,0)
- [C] (0,-3)
- [D] (0,3)

17. What is the solution set for the equation  $|2x + 9| = 19$  ?

- [A] 5
- [B] -14
- [C] {5, -14}
- [D] {5, -5}

18. Which point lies on the line of the graph of the equation  $y = \frac{3}{4}x - 8$

- [A] (0,8)
- [B] (3,-4)
- [C] (4,-5)
- [D] (-4,11)

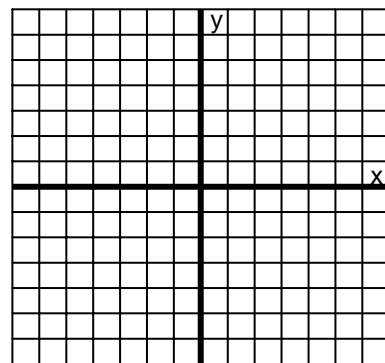
19. Which of the following inequalities is equivalent to  $-5(y - 7) \leq 25 - y + 8$  ?

- [A]  $-5y - 35 \leq 17 - y$
- [B]  $-5y + 35 \leq 17 - y$
- [C]  $-5y + 35 \leq 33 - y$
- [D]  $-5y - 35 \leq 33 - y$

20. Which equation has a slope of 3 and contains the point (3, -2)

- [A]  $y - 2 = 3(x - 3)$
- [B]  $y + 2 = 3(x - 3)$
- [C]  $y - 2 = 3(x + 3)$
- [D]  $y - 2 = 3(x - 3)$

21. Graph  $2x - 3y = 6$



22. Which ordered pair represents the y-intercept of  $x + 8y = 32$  ?

- [A] (4, 0)
- [B] (0, 32)
- [C] (32, 0)
- [D] (0, 4)

23. What is the slope of a line that is perpendicular to the graph of

$$y + 5 = 8 - \frac{4}{7}x ?$$

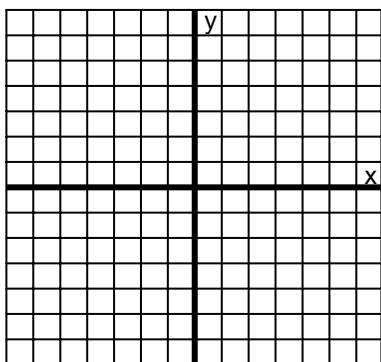
- [A]  $-\frac{4}{7}$
- [B]  $\frac{7}{4}$
- [C]  $-\frac{7}{4}$
- [D]  $-\frac{1}{3}$

24. Which of the following points is the x-intercept of the graph ?

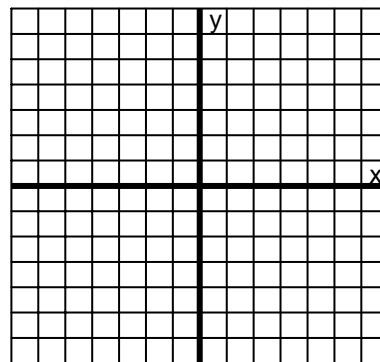
$$4x - 5y = 40$$

- [A] (0, -8)
- [B] (-8, 0)
- [C] (10, 0)
- [D] (0, 10)

25. Graph  $x - 2 < 0$



26. Graph  $3x + y = 5$



27. Which of the following points lies on the line represented by  $y = 5x + 3$  ?

- [A] (2, 7)
- [B] (1, 2)
- [C] (1, 8)
- [D] (3, 13)

28. Which of the following points lies on the graph of the equation  $y = -\frac{4}{5}x - 7$  ?

- [A] (5, -11)
- [B] (0, 7)
- [C] (-5, -27)
- [D] (-4, 5)

29. The graph of a linear equation has a slope of  $-5$  and it passes through point  $(-6, 2)$ . Which of the following is the equation of the line?

- [A]  $y = -5x + 2$
- [B]  $y = -5x - 6$
- [C]  $y = -5x - 28$
- [D]  $y = -5x + 32$

30. The graph of which of the following equations contains the point (0, -7) ?

[A]  $-x - y = -7$

[B]  $x - y = -7$

[C]  $x + y = 7$

[D]  $x + y = -7$

31. What is the slope of a line that is perpendicular to the graph of

$$y - 6 = 10 + \frac{3}{4}x$$

[A]  $-\frac{4}{3}$

[B]  $-\frac{3}{4}$

[C]  $\frac{4}{3}$

[D]  $\frac{3}{4}$

32. The graph of which equation has a slope of  $\frac{2}{3}$  and contains the point (-7, 5) ?

[A]  $y + 5 = \frac{2}{3}(x - 7)$

[B]  $y - 7 = \frac{2}{3}(x + 5)$

[C]  $y + 7 = \frac{2}{3}(x - 7)$

[D]  $y - 5 = \frac{2}{3}(x + 7)$

33. What is the slope of a line parallel to the graph of the equation  $2x + 5y = 6$ ?

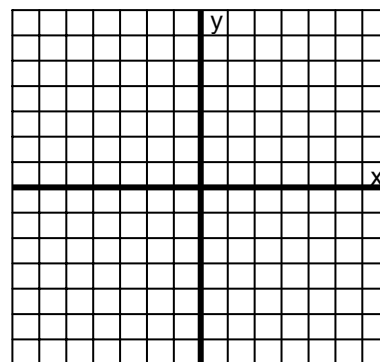
[A]  $\frac{5}{2}$

[B]  $\frac{2}{5}$

[C]  $-\frac{2}{5}$

[D]  $-\frac{5}{2}$

34. Graph  $y = -2x - 3$



35. Which equation represents the line that passes through the points (1,1) and (-2,7)?

[A]  $y = -2x + 3$

[B]  $y = -2x - 3$

[C]  $y = 2x - 3$

[D]  $y = 2x + 3$

36. Which equation has a slope of 5 and contains the point  $(-4, -4)$  ?

- [A]  $x - 4 = 5(y - 4)$
- [B]  $y + 4 = 5(x + 4)$
- [C]  $y - 4 = 5(x - 4)$
- [D]  $x + 4 = 5(y + 4)$

37. Troy has a total of 360 baseball cards. He has filled 4 identical albums and has 40 cards remaining. How many cards are in each album?

- [A] 40
- [B] 60
- [C] 80
- [D] 100

38. The Mountain Spring Water Company pays delivery drivers \$280 per week plus 30% of their weekly sales. If a driver had sales of \$60 for the week, what are her total weekly earnings?

- [A] \$298
- [B] \$280
- [C] \$310
- [D] \$282

39. A line has a slope of  $-4$  and a  $y$  intercept of 6. What is the equation of the line in standard form?

- [A]  $-4x + y = 6$
- [B]  $4x + y = 6$
- [C]  $4x - y = 6$
- [D]  $4x + y = -6$

40. What is the slope of a line parallel to the graph of  $4x + 9y = 8$ ?

- [A]  $-\frac{4}{9}$
- [B]  $\frac{4}{9}$
- [C]  $-\frac{9}{4}$
- [D]  $\frac{9}{4}$

41. What is the slope of a line that is perpendicular to the graph of

$$y - 7 = 9 - \frac{5}{3}x \text{ ?}$$

- [A]  $\frac{5}{3}$
- [B]  $-\frac{5}{3}$
- [C]  $-\frac{3}{5}$
- [D]  $\frac{3}{5}$