

Name: _____
Date: _____ Per: _____

Unit 5 Practice Test

Determine whether or not each of the following points are **solutions** of: $2x + 3y = 12$

1. (2, 3)

2. (3, 2)

3. (6, 0)

Using the **SLOPE FORMULA**, Find the slope of the lines containing these points.

4. (4, 8) (6, 2)

5. (9, -2) (-3, -5)

6. (-2, 6) (-2, 5)

7. (3, 5) (-2, 5)

8. Name the **slope and y-intercept** of: $y = 2x - 4$ slope: _____ y-int.: _____

9. Name the **slope and y-intercept** of: $4x - 8y = 16$ slope: _____ y-int. _____
(Hint: Solve for y first!!)

10. Write the equation of a line with a slope of 5 and a y-intercept of (0, -4) _____

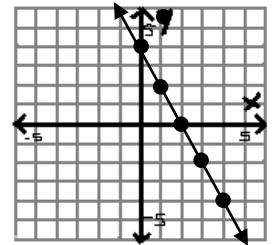
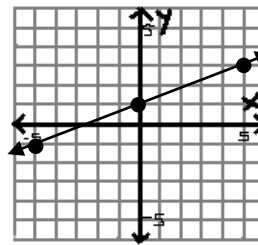
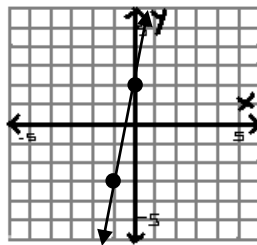
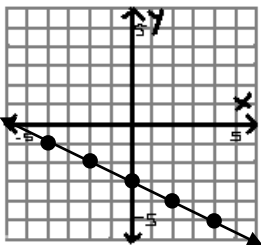
Give the equation in slope-intercept form ($y = mx + b$) of each line:

11. _____

12. _____

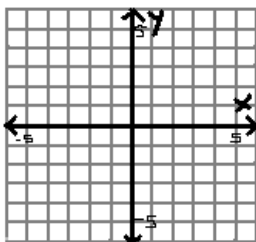
13. _____

14. _____

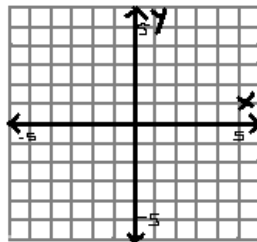


Graph by **any** method:

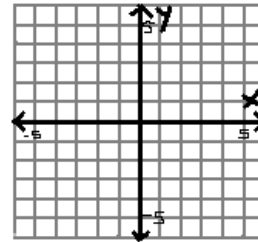
15. $y = -3x - 2$



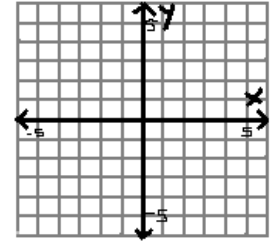
16. $y = \frac{3}{5}x - 2$



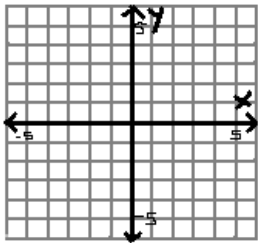
17. $14x - 7y = 28$



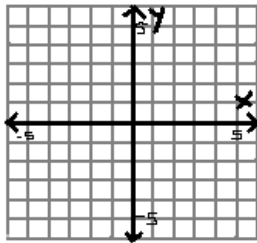
18. $5x + 10y = -20$



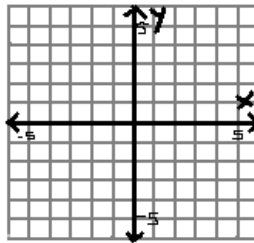
19. $y = x$



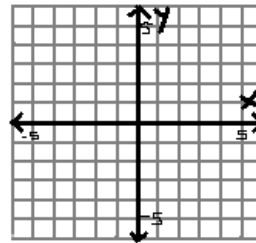
20. $y = -2x$



21. $y = -2$



22. $x = -4$



23. What is slope? _____

24. What are intercepts? _____

25. Give ONLY the x-intercept of $6x - 3y = -24$ _____

26. Give ONLY the y-intercept of $-5x - 2y = -20$ _____

Using the **POINT SLOPE FORMULA**, Write an equation for the line containing the given point and slope:

27. $(5, 2)$ $m = 3$

28. $(-2, 4)$ $m = \frac{1}{2}$

Using the **POINT SLOPE FORMULA**, Write the equation for the line containing these two points: *Hint*: You have to use the **slope formula** to solve for m first.

29. $(1, 1)$ $(2, -2)$

30. $(4, -1)$ $(-4, -3)$

Determine whether the lines are **parallel**, **perpendicular**, or **neither**?

31. $y = -2x + 6$ and $2x + y = 4$

32. $-4x + y = -2$ and $x + 4y = 8$

33. What is the equation of the line that passes through the point $(1, 5)$; and is **parallel** to the equation. $y = -2x - 4$

34. What is the equation of the line that passes through the point $(6, -2)$; and is **parallel** to the equation. $y = -\frac{1}{2}x - 4$

35. What is the equation of the line that passes through the point $(6, -2)$; and is **perpendicular** to the equation.

$$y = \frac{1}{3}x + 2$$

36. What is the equation of the line that passes through the point $(4, -5)$; and is **perpendicular** to the equation.

$$y = -2x + 1$$

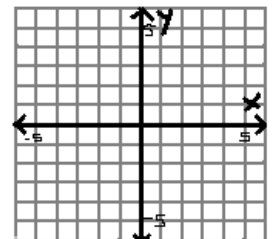
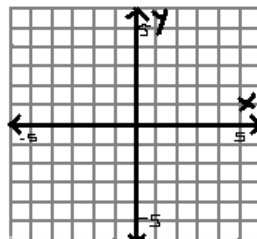
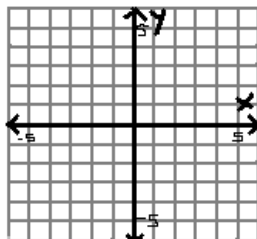
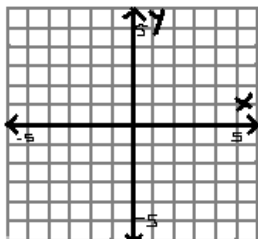
Graph the following linear inequalities using any method. (Don't forget to shade.)

37. $y < 2x - 3$

38. $y \geq -\frac{2}{3}x + 5$

39. $9x + 6y > 18$

40. $-12x - 6y \leq 24$



Name: Key
Date: Per.

Unit 5 Practice Test

Determine whether or not each of the following points are solutions of: $2x + 3y = 12$

1. (2, 3) $2(2) + 3(3) = 12$
 $4 + 9 = 12$
 $13 \neq 12$ **No**

2. (3, 2) $2(3) + 3(2) = 12$
 $6 + 6 = 12$
 $12 = 12$ **Yes**

3. (6, 0) $2(6) + 3(0) = 12$
 $12 + 0 = 12$
 $12 = 12$ **Yes**

Using the SLOPE FORMULA. Find the slope of the lines containing these points.

4. (4, 8), (6, 2) $\frac{2-8}{6-4} = \frac{-6}{2} = -3$ **$m = -3$**

5. (9, -2), (-3, -5) $\frac{-5+2}{-3-9} = \frac{-3}{-12} = \frac{1}{4}$ **$m = \frac{1}{4}$**

6. (-2, 6), (-2, 5) $\frac{5-6}{-2+2} = \frac{-1}{0} = \text{Und.}$ **$m = \text{Und.}$**

7. (3, 5), (-2, 5) $\frac{5-5}{-2-3} = \frac{0}{-5} = 0$ **$m = 0$**

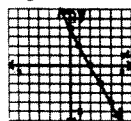
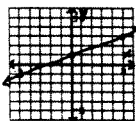
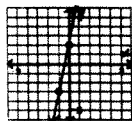
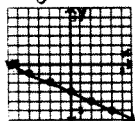
8. Name the slope and y-intercept of: $y = 2x - 4$ slope: 2 y-int: (0, -4)

9. Name the slope and y-intercept of: $4x - 8y = 16$ slope: $\frac{1}{2}$ y-int: (0, -2)
(Hint: Solve for y first!!)
 $4x - 8y = 16$
 $-8y = -4x + 16$
 $y = \frac{1}{2}x - 2$
* You can only see slope in $y = mx + b$ form.

10. Write the equation of a line with a slope of 5 and a y-intercept of (0, -4) **$y = 5x - 4$**

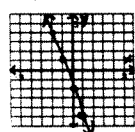
Give the equation in slope-intercept form ($y = mx + b$) of each line:

11. **$y = -\frac{1}{2}x - 3$** 12. **$y = 5x + 2$** 13. **$y = \frac{2}{3}x + 1$** 14. **$y = -2x + 4$**

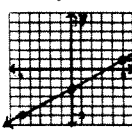


Graph by any method:

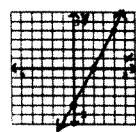
15. $y = -3x - 2$



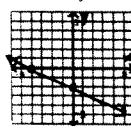
16. $y = \frac{1}{2}x - 2$



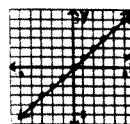
17. $14x - 7y = 28$



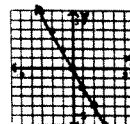
18. $5x + 10y = -20$



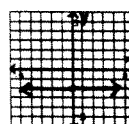
19. $y = x$



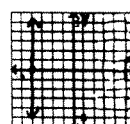
20. $y = -2x$



21. $y = -2$



22. $x = -4$



23. What is slope? The ratio of vertical change to horizontal change.

24. What are intercepts? The points where the line crosses the axes.

25. Give ONLY the x-intercept of $6x - 3y = -24$ **(-4, 0)**

26. Give ONLY the y-intercept of $-5x - 2y = -20$ **(0, 10)**

Using the POINT SLOPE FORMULA. Write an equation for the line containing the given point and slope:

27. (5, 2) $m = 3$
 $y - 2 = 3(x - 5)$
 $y - 2 = 3x - 15$
 $y = 3x - 13$

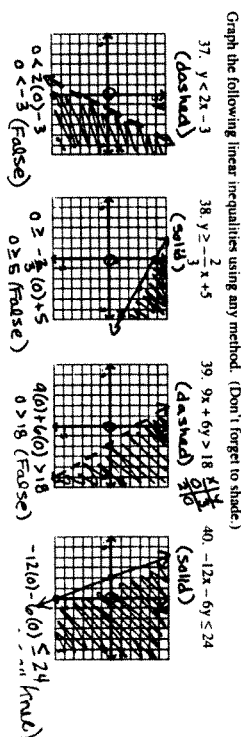
28. (-2, 4) $m = \frac{1}{2}$
 $y - 4 = \frac{1}{2}(x - (-2))$
 $y - 4 = \frac{1}{2}(x + 2)$
 $y - 4 = \frac{1}{2}x + 1$
 $y = \frac{1}{2}x + 5$

Using the POINT SLOPE FORMULA. Write the equation for the line containing these two points: Hint: You have to use the slope formula to solve for m first.

29. (1, 1), (2, -2)
 $m = \frac{-2-1}{2-1} = \frac{-3}{1} = -3$

$y - 1 = -3(x - 1)$
 $y - 1 = -3x + 3$
 $y = -3x + 4$

30. (4, -1), (-4, -3)
 $m = \frac{-3+1}{-4-4} = \frac{-2}{-8} = \frac{1}{4}$
 $y + 1 = \frac{1}{4}(x - 4)$
 $y + 1 = \frac{1}{4}x - 1$
 $y = \frac{1}{4}x - 2$



35. What is the equation of the line that passes through the point (6, -2), and is perpendicular to the equation: $y = \frac{1}{3}x + 2$
 $m = \text{opposite reciprocal} = -3$
 $y - (-2) = -3(x - 6)$
 $y + 2 = -3x + 18$
 $y = -3x + 16$

36. What is the equation of the line that passes through the point (4, -5), and is perpendicular to the equation: $y = \frac{1}{2}x + 1$
 $m = \text{opposite reciprocal} = -2$
 $y - (-5) = -2(x - 4)$
 $y + 5 = -2x + 8$
 $y = -2x + 3$

33. What is the equation of the line that passes through the point (1, 3) and is parallel to the equation: $y = -2x - 4$
 $m = -2$
 $y - 3 = -2(x - 1)$
 $y - 3 = -2x + 2$
 $y = -2x + 5$

34. What is the equation of the line that passes through the point (6, 2) and is parallel to the equation: $y = \frac{1}{2}x - 4$
 $m = \frac{1}{2}$
 $y - 2 = \frac{1}{2}(x - 6)$
 $y - 2 = \frac{1}{2}x - 3$
 $y = \frac{1}{2}x - 1$

Same slope = parallel
 $m = -2$
 $y = -2x + 4$

opposite reciprocal = perpendicular
 $m = \frac{1}{2}$
 $y = \frac{1}{2}x + 2$

Determine whether the lines are parallel, perpendicular, or neither?

31. $y = -2x + 6$ and $2x + y = 4$

$m = -2$
 $y = -2x + 4$

$m = -2$
 $y = -2x + 4$

parallel