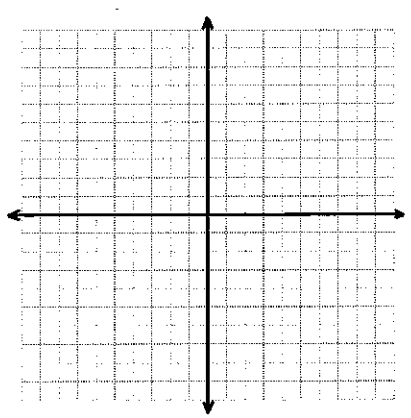
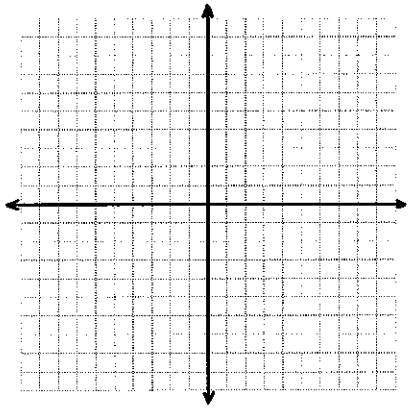
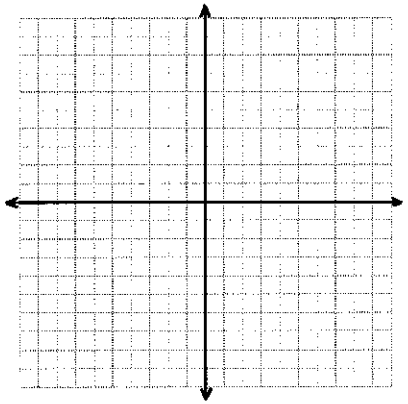
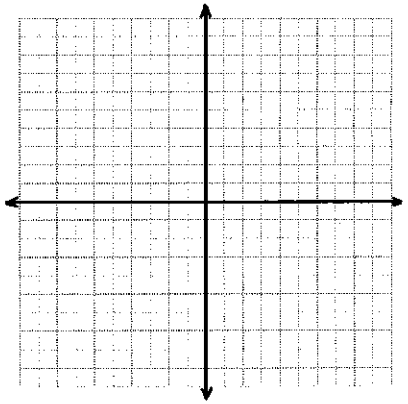
Name _____ Algebra Review

Explain how to graph in slope-intercept form: _____

_____

State the slope and y-intercept, then graph

1. $Y = -\frac{3}{2}x + 5$
2. $Y = 3x - 4$
3. $4y = -3x + 12$
4. $-2x + y = x - 5$

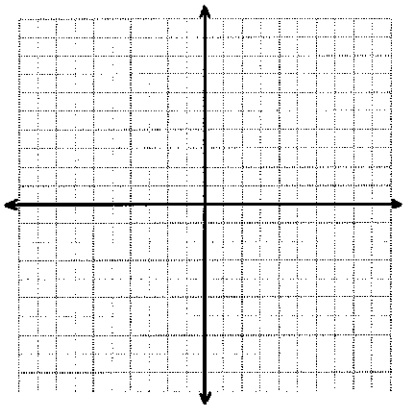





What is the slope of a horizontal line? _____ What is the slope of a vertical line? _____

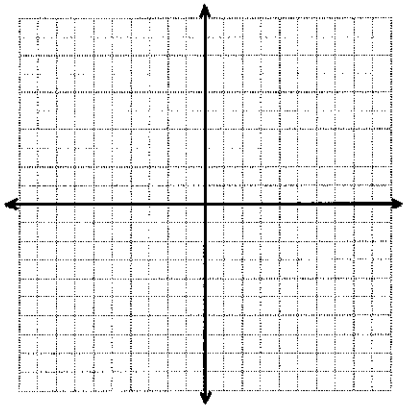
4. y = 4 is a _____ line with a slope _____

5. x = -16 is a _____ line with a slope _____

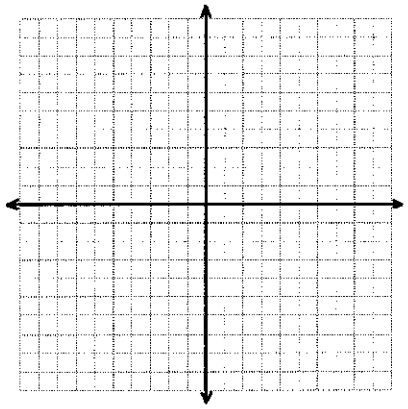
6. y = -3



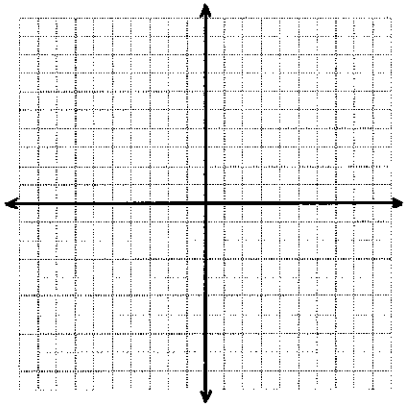
7. X = 4



8. y = 6



9. x = -5



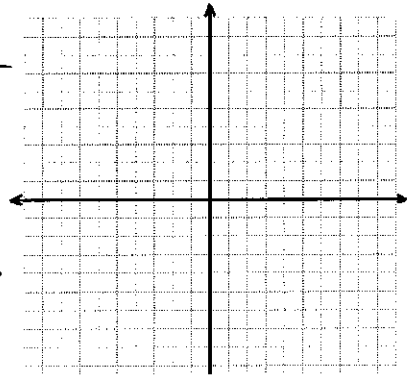
Explain how to use the Standard form of an equation to find the x and y-intercepts, and how to graph the intercepts:

Find the x and y intercepts and graph:

10. 3x - y = -6

X-int

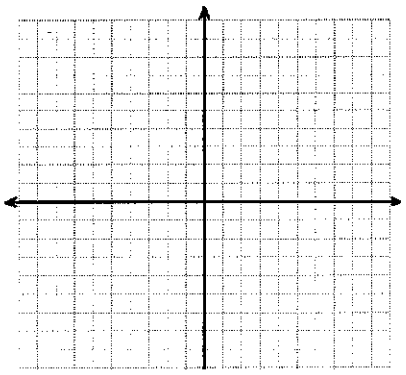
y-int



11. -x + 4y = 6

X-int

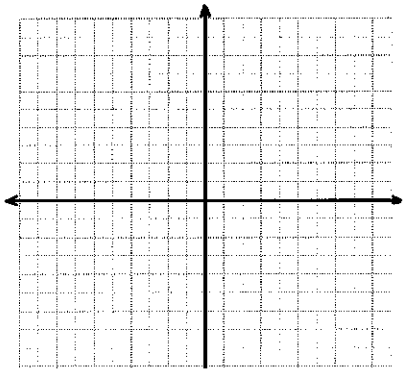
y-int



12. 3y + 5x = 12

X-int

y-int



Explain what the directions "write an equation in **standard form** using **integers**" means to do:

_____

_____

_____

Write each equation in standard form using integers:

13. $3y = x + 9$

14. $\frac{1}{2}x + 4y = \frac{1}{4}$

15. $-2x + 7 = -\frac{1}{5}y$

16. $\frac{2}{3} - \frac{1}{5}y = \frac{3}{5}x$

17. $5y - \frac{1}{2} = 2x$

18. $2x + 3y = 12$

19. $\frac{1}{6} = 2x - \frac{1}{3}y$

20. $3y = -\frac{4}{7} + \frac{2}{3}x$

Formula for calculating slope: _____ Find the slope:

21. (-3, 4) (2, 8)

22. (2, 0) (-4, -8)

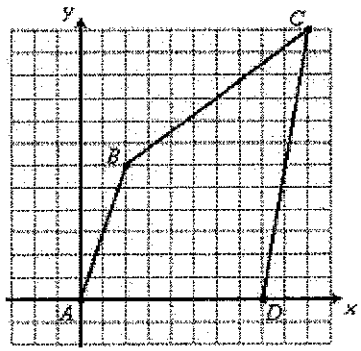
23. Find the slope of each segment:

AB=

DC=

BC=

AD=

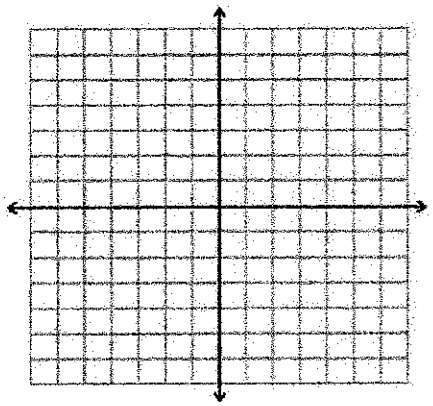


24. Write an equation in standard form to model the situation: You have $5.00 in your wallet. Gummy bears are $0.10 each and airheads are $0.75 each.

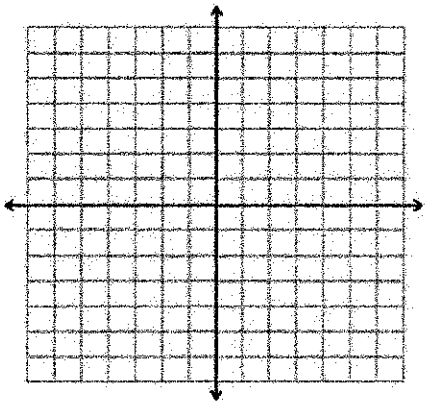
Write the point slope formula. Explain how to use the formula to graph a line.

Graph each equation in point slope form:

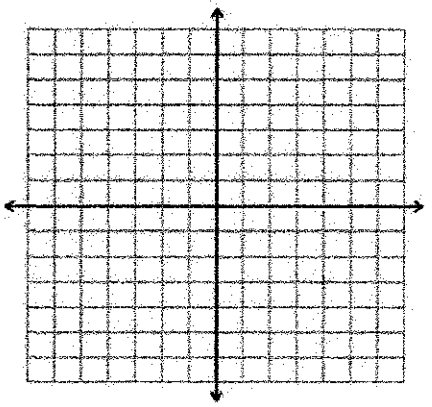
25. $y - 3 = -\frac{2}{3}(x + 4)$



26. $Y + 2 = -3(x + 5)$



27. $y - 4 = \frac{1}{2}(x - 1)$



Write an equation in A. point slope form B. slope-intercept form

28. slope = 2 through (-4, 5)

29. Slope = $-\frac{1}{3}$ through (-9, 7)

30. Slope = $\frac{3}{4}$ through (2, -5)

Are the lines parallel, perpendicular, or neither? Why?

31. $y = 2x - 5, y = 2x + 5$

32. $Y = -\frac{1}{3}x + 4, y = 3x + 4$

33. $Y = \frac{5}{3}x + 9, y = \frac{3}{5}x - 2$

34. $2x - y = 6, \quad -4x + 2y = -12$

35. $6y = 4x + 18, \quad 3x + 2y = -2$

37. $5y - 5x = 30, \quad 4x = 4y + 16$

Write an equation in **slope intercept form** for the line PARALLEL to the given line through the point.

38. $y = \frac{2}{3}x + 8 \quad (-15, 20)$

39. $5x - 4y = 40 \quad (24, -5)$

40. $3x - y = 10 \quad (12, 4)$

Write an equation in **slope intercept form** for the line PERPENDICULAR to the given line through the point.

41. $y = -2x + 10 \quad (20, 24)$

42. $3x + 9y = 18 \quad (-2, 5)$

43. $4x - 3y = -24 \quad (9, 12)$