Name_____ICP Solving proportions and direct variation lines 8-26-15

Goal: Solve a proportion that involves a linear equation

Solve each of the following proportions

1. $\frac{1}{2}=\frac{x}{4}$

X= _____

2. $\frac{1}{2}=\frac{x}{5}$

X= _____

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

X= _____

4. $\frac{1}{2}=\frac{x+5}{9}$

X= _____

5. $\frac{x-4}{2}=\frac{x+5}{8}$

X= _____

6. $\frac{2x-14}{2}=\frac{-x}{9}$

X= _____

7. Which of the problems above did NOT require cross-multiplication?

8. Which of the problems above have distribution involved in the solution process?

9. Which of the following lines must pass through the origin and why? _____

a) $y=\frac{x}{4}$

b) $y=\frac{3}{4}x-4$

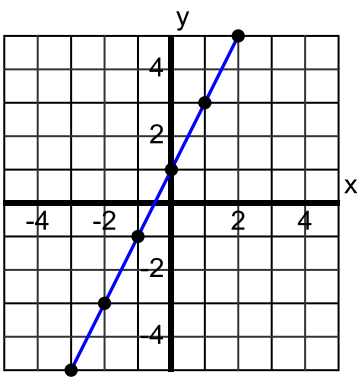
c) $y=\frac{5}{6}x$

d) 5x-9y=0

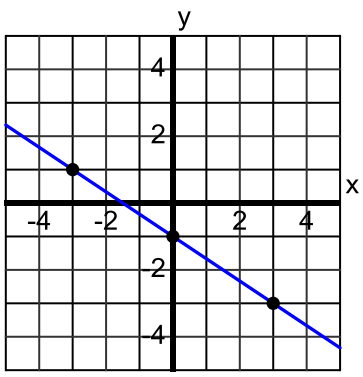
Goal: Recognition of direct variation line from a graph **Goal: Write the equation of the direct variation line from a graph**
Goal: state the constant of variation of a direct variation line from a graph

10. Which of the lines below are direct variation lines?

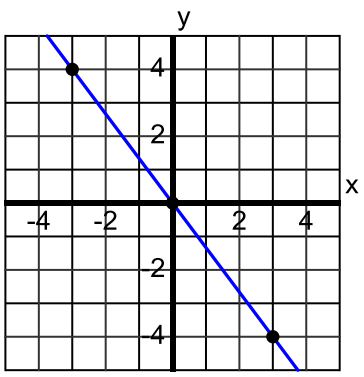
Line A



Line B



Line C



11. For a line to be a direct variation line, that line must pass through what specific point? _____
    Hint: This point is the only point on both the x and the y axes

12. State the slope of the direct variation line above _____ This can also be called the _____

13. State the direct variation equation for the direct variation line _____

Goal: Translate a verbal statement into direct variation equation
Goal: Determine a missing coordinate that lies on the direct variation line

14. If y varies directly as x and when x =12 y = 5, then determine the value of x when y = 7.5

Direct variation equation _____ constant of variation = _____ Related proportion =_____

X = _____ Show work here

15. If q varies directly as r and when r =9 q = 24, then determine the value of q when r = 3

Direct variation equation _____ constant of variation = _____ Related proportion =_____

q = _____ Show work here