

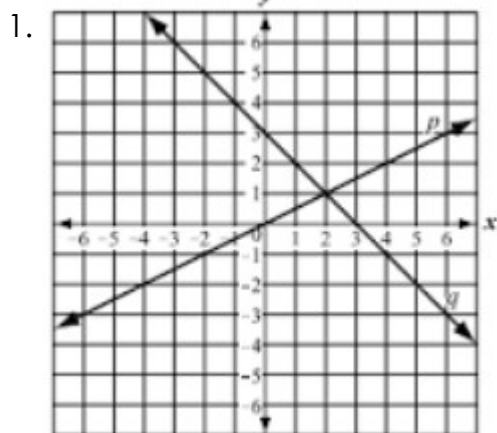
Name: \_\_\_\_\_  
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 Henderson - Math 8

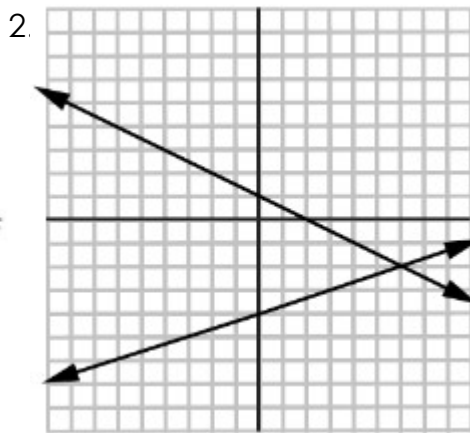
## Homework for Week 19

**Monday: HW# 19A** (go to [www.khanacademy.org](http://www.khanacademy.org) or [www.hendersonmath.com](http://www.hendersonmath.com) for review)

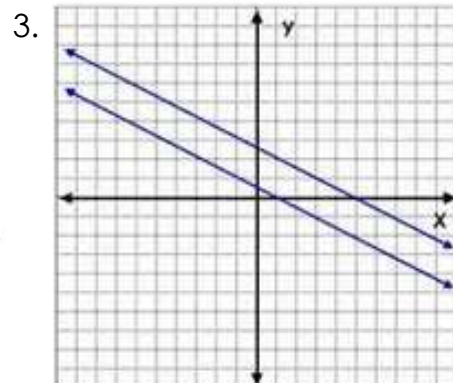
Find the solution to the system of equations shown in the graph.



(2, 1)



(6, -2)



No Solution

**Tuesday: HW# 19B** (go to [www.khanacademy.org](http://www.khanacademy.org) or [www.hendersonmath.com](http://www.hendersonmath.com) for review)

Find the solution to the system of equations using ANY METHOD.

4.)  $x + 2y = 7$   
 $3x - 2y = -11$

$$\begin{array}{r} + \\ \hline 4x = -4 \\ \hline \frac{4x}{4} = \frac{-4}{4} \end{array}$$

*elimination method*

$x = -1$

$(-1) + 2y = 7$

$-1 + 2y = 7$

$\frac{2y}{2} = \frac{8}{2}$

$y = 4$

$(-1, 4)$

5.)  $y = 3x + 7$

$y = 3x - 9$

*Substitution method*

$3x - 9 = 3x + 7$

$+9 \quad +9$

$3x = 3x + 16$

$-3x \quad -3x$

$0 \neq 16$

$\text{No Solution}$

**Wed: HW#19C** (go to [www.khanacademy.org](http://www.khanacademy.org) or [www.hendersonmath.com](http://www.hendersonmath.com) for review)

Write each expression using **positive exponents**.

6.)  $m^3 \cdot m^8$   $m^{11}$      $5^9 \cdot 5^{-7}$   $5^2$      $4m^2 \cdot 2m^7$   $8m^9$      $x^{-10}$   $\frac{1}{x^{10}}$

Write each expression using positive exponents. **Evaluate, if possible.**

7.)  $x^{-7}$   $\frac{1}{x^7}$      $5^{-4}$   $\frac{1}{5^4} = \frac{1}{625}$      $3^{-2}$   $\frac{1}{3^2} = \frac{1}{9}$      $5 \cdot w^{-3}$   $5 \cdot \frac{1}{w^3} = \frac{5}{w^3}$

8.)  $\frac{3^8}{3^4}$   $3^4 = 81$      $\frac{m^7}{m^3}$   $m^4$      $\frac{2^2}{2^9}$   $\frac{2^2}{2^9} = \frac{1}{128}$      $\frac{4^6 \cdot 6^{12}}{4^3 \cdot 6^{12}}$   $4^3 \cdot 1 = 64$

**SIMPLIFY.**

9.)  $5^{-8} \times 5^4$   $5^{-4} = \frac{1}{5^4} = \frac{1}{625}$      $6^{-3} \times 6^{-2}$   $6^{-5} = \frac{1}{6^5} = \frac{1}{7776}$

**Thursday: HW#19D** (go to [www.khanacademy.org](http://www.khanacademy.org) or [www.hendersonmath.com](http://www.hendersonmath.com) for review)

10.) Find the rate of change for the following data:

(8, 7) and (8, -3)

$$\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 7}{8 - 8} = \frac{-10}{0}$$

**Answers**

10) undefined

11)  $y = 2x^2 + 1$

12)  $c$

11.) Write an example of an equation of a NON-LINEAR function

any power other than 1

$y = 2x^2 + 1$

12.) Which of the following is NOT a linear equation?

a)  $y = x + 6$

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

c)  $y = 5x^{-3} + 2$

d)  $3.2x + 4.1y = 7.3x$

13.) Is the graph shown to the right a function? Describe in words how you were able to determine your answer.

Yes it is a function b/c it passes the vertical line test. Every value of x has a unique value of y.

