



Objective: Introduction to Systems

Homework SY0 – The Doctor's Intro to Systems Handout

Do Now: Find slope of the line that passes through these points.

1. (2, 10) (6, 20)

2. (1, 0) (–2, 9)

Exam Prep: Which of the following lines is parallel to $y = 2x + 4$?

A) $y = -2x + 4$

C) $2y - 10 = 4x$

B) $2y = 2x$

D) $y = -\frac{1}{2}x + 1$



A very special message from The Doctor...

This quick lesson introduces systems to you by using prior knowledge of slope and linear functions. Do not move on to solving systems without understanding the concepts within this lesson. Refer to prior material for additional help.

A **system of equations** is a set of two or more equations with the same variables. If the system has a solution, it would be a coordinate common to all the equations in the system.

Example: $y = x + 4$ and $y = -2x + 10$

Solution: (2, 6)

This solution can be found by graphing or using Algebra. We will explore both.

Future Discussion: How do you think we would find the solution?

The Readiness Checklist

Slope 1. Find the equation of a line in slope-intercept form, $y = mx + b$.

a) $m = 8, b = -5$

b) $m = -\frac{1}{2}, (6, -1)$

c) (9, 7) (3, 3)

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Slope 2. Put the functions into slope-intercept form, $y = mx + b$.

a) $5y + 2x = 55$

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

c) $3x + y = x$

Slope 3. Graphing a line and identifying the equation of a line from a graph.

a) Write the equations of lines.

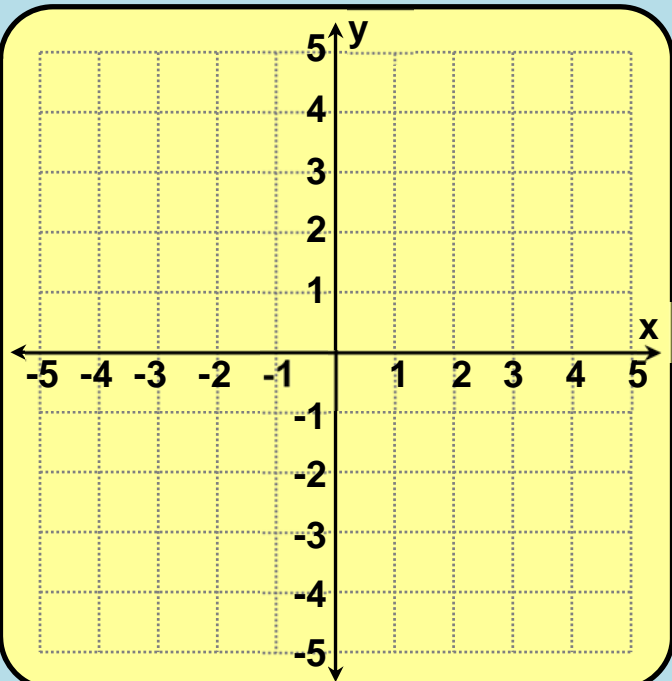
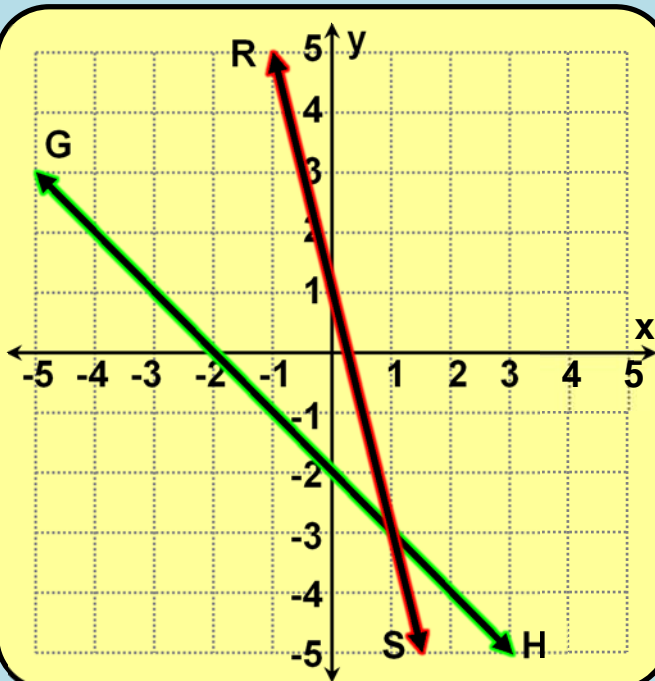
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b) Graph the linear equations.

JK: $y = \frac{2}{3}x - 1$

PW: $y = -x + 4$



Algebra 1. Basic signed-number problems

a) $3 + -5 =$

b) $-4 + -18 =$

c) $-20 + 12 =$

d) $8 + -13 + -9 =$

e) $-10x + x =$

f) $-16y + -6y =$

g) $-3x + -3x =$

h) $6x + -5x + -x =$

Algebra 2. Solving equations with simplification

a) $4x + 10 = 3x + 2$

b) $2(3x - 12) = 5(2x)$

c) $10 - 4x = x - 50$

Algebra 3. Substitute the given info and simplify.Given

$a = 5$

$b = -3$

$c = 2x$

$d = -5x$

$e = x + 1$

a) $y = 2a$

b) $y = 4d + c + a$

c) $y = c + b$

d) $y = e + 2b$

e) $y = 2e$

f) $y = d - c + ab$