Writing Equation #2

Now we will extend our previous lesson to include situations where 2 points are known. This is the most likely situation in your science classes as you collect data and draw lines of best fit.

We simply need to add 1 more step to out procedure

Find the equation of the line that passes thru:

a) (5, 9) and (0, -2)

Step 1: ***Find m*** $m = \frac{-2-9}{0-5}$ *or* $\frac{-11}{-5}$

Step 2: ***place the slope*** $y = \frac{11}{5}x + b$

Step 3: ***plug in either point*** $-2 = \frac{11}{5}(0) + b$ ***-2 = 0 + b***

Step 4: ***solve for b and write final equation:*** ***b = -2*** ***Answer:*** $y = \frac{11}{5}x - 2$

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b) (7, 4) and (9, 12)

$m = \frac{12-4}{9-7}$ *or* $\frac{8}{2}$ *thus* $m = 4$

Y = 4x + b → ***12 = 4(9) + b*** ***12 = 36 + b*** ***y = 4x - 24***

Or → ***4= 4(7) + b*** ***4 = 28 + b*** ***y = 4x – 24***

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c) (5, -6) and (2, 3)

$m = \frac{3--6}{2-5}$ *or* $\frac{9}{-3}$ *thus* $m = -3$

Y = -3x + b → ***3= -3(2) + b*** ***3 = -6 + b*** ***y = -3x + 9***

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d) (8, -7) and (13, -9)

$m = \frac{-9--7}{13-8}$ *or* $\frac{-2}{5}$

$y = \frac{-2}{5}x + b$ → $-7 = \frac{-2}{5}(8) + b$ ***b=*** $\frac{-19}{5}$ $y = \frac{-2}{5}x - \frac{19}{5}$

Assignment = worksheet

What happened when 2 Fruit Companies Merged?

Place the 2 letters in the blanks provided

3	3	5	5	8	8	1	1	4	4	7	7	9	9	2	2	10	10	6	6

Find the equation that passes thru the given points

1) (1, 5)(2, 7)

2) (0, 1)(3, -8)

3) (2, -3)(4, -2)

4) (2, 5)(4, 2)

5) (-3, -5)(-1, 3)

6) (3, -1)(-6, -4)

7) (4, 1)(-4, 7)

8) (-1, 2)(3, 4)

9) (-1, -4)(2, 0)

10) (3, -1)(-3, 5)

Answers:

HA $y=\frac{1}{2}x-1$	ER $y=-\frac{3}{4}x+4$	IS $y=\frac{2}{3}x+3$	TH $y=\frac{1}{2}x-4$
IS $y=\frac{1}{3}x+\frac{8}{3}$	EL $y=-2x-1$	AP $y=-\frac{3}{2}x+8$	UI $y=-3x+5$
PE $y=-x+2$	EA $y=-\frac{3}{4}x+2$	ST $y=\frac{1}{2}x-7$	DE $y=2x+3$
SO $y=\frac{4}{3}x-2$	AR $y=\frac{1}{3}x-2$	CT $y=-3x+1$	EY $y=4x+7$
MA $y=\frac{1}{2}x+\frac{5}{2}$	FE $y=\frac{4}{3}x-\frac{8}{3}$	LO $y=-\frac{3}{2}x-4$	IL $y=2x+1$

Now try Page 372 #10, 11 (Just do slope-intercept form)