Reminders:

. Skills Test over Equations - Tomorrow!!!

. Unit Test (Ch. 4 & 5 & 6.7) - Thursday, 10/27

. Last day of the quarter is Thursday, 11/10

. Last day for make-up work (excused!) is Monday, 11/14

Homework Review - Equations Skills Test Practice

$\frac{2}{3}x + \frac{3}{4} = \frac{1}{2}$

$-\frac{3}{4} \quad -\frac{3}{4}$

$\frac{2}{3}x = -\frac{1}{4}$

$\frac{\frac{2}{3}}{\frac{2}{3}} \quad \frac{-\frac{1}{4}}{\frac{2}{3}}$

$x = -\frac{3}{8}$

$2x + 3 = 1$

$-3 \quad -3$

$\frac{2x}{2} = \frac{-2}{2}$

$x = -1$

$-\frac{1}{4} \div \frac{2}{3}$

$-\frac{1}{4} \cdot \frac{3}{2} = -\frac{3}{8}$

$\frac{2}{2} \cdot \frac{1}{2} - \frac{3}{4}$

$\frac{2}{4} - \frac{3}{4} = -\frac{1}{4}$

$\frac{1}{2}n + 14 = \frac{2}{3}n - 4$

$-\frac{1}{2}n \qquad -\frac{1}{2}n$

$14 = \frac{1}{6}n - 4$

$+4 \qquad +4$

$\frac{18}{\frac{1}{6}} = \frac{\frac{1}{6}n}{\frac{1}{6}}$

$108 = n$

$18 \div \frac{1}{6}$

$18 \cdot \frac{6}{1}$

$18 \cdot 6 = 108$

$1n + 14 = 2n - 4$

$-1n \qquad -1n$

$14 = n - 4$

$+4 \qquad +4$

$\frac{18}{2} = \frac{2n}{2}$

$9 = n$

$\frac{2}{3}n - \frac{1}{2}n = \frac{1}{6}n$

$\frac{2}{2} \cdot \frac{2}{3} - \frac{1}{2} \cdot \frac{3}{3}$

$\frac{4}{6} - \frac{3}{6} = \frac{1}{6}$

$$\frac{5}{11}c + 3 = \frac{-4}{7}c - \frac{2}{3}$$

$+\frac{4}{7}c$ $+\frac{4}{7}c$

$\frac{79}{77}c + 3 = -\frac{2}{3}$

-3 -3

$\frac{79}{77}c = -\frac{11}{3}$

$\frac{-2}{3} - 3$

$\frac{-2}{3} - \frac{3}{1} \cdot \frac{3}{3}$

$\frac{-2}{3} - \frac{9}{3} = \frac{-11}{3}$

$\frac{-11}{3} \div \frac{79}{77}$

$\frac{-11}{3} \cdot \frac{77}{79} = -\frac{847}{237}$

$$c = \frac{-847}{237}$$

$5c + 3 = -4c - 2$

$+4c$ $+4c$

$9c + 3 = -2$

-3 -3

$\frac{9c}{9} = \frac{-5}{9}$

$c = \frac{-5}{9}$

Identifying parallel lines from an equation:

$y = \frac{1}{2}x + 2$ $y = \frac{1}{2}x - 3.218$

Same slope! = parallel!

$2x + 3y = 4$ $\longleftrightarrow$ $y = \frac{3}{2}x - 2$

$-2x \quad -2x$

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

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

$-3x + 4y = 11$

$+3x \quad +3x$

$\frac{4y}{4} = \frac{3x + 11}{4}$

$y = \frac{3}{4}x + \frac{11}{4}$

$y = \frac{3}{4}x$

Are they parallel?

nope!

Write an equation for a parallel line...

Identifying perpendicular lines from an equation: (intersect at a 90° angle!)

$\frac{a}{b} \longrightarrow \frac{-b}{a}$

$\frac{2}{3} \longrightarrow -\frac{3}{2}$

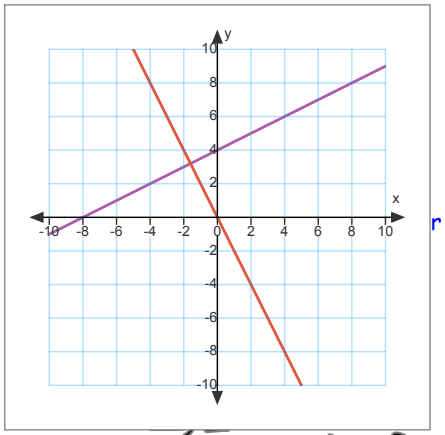
$\frac{4}{1} \longrightarrow -\frac{1}{4}$

$-\frac{1}{3} \longrightarrow +\frac{3}{1} = 3$

Slopes are negative reciprocals!

$y = \frac{-4}{3}x + -6 \qquad y = \frac{3}{4}x + 7$

$y = \frac{1}{2}x + 4 \qquad y = (-2)x$



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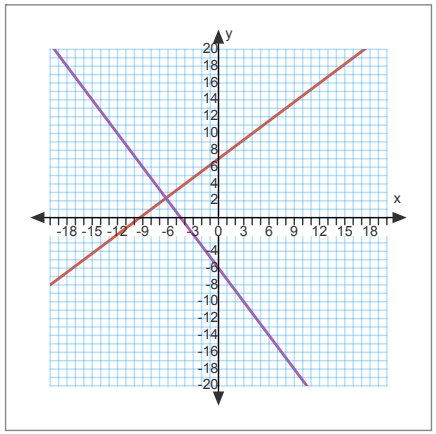
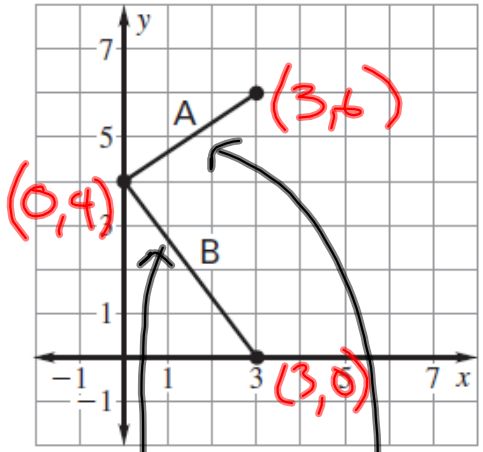
$2 \quad \frac{-}{1} \rightarrow -2$



Kite Design You are beginning to model a kite design on the coordinate plane, as shown.



$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

find slope ... (0,4) and (3,6)

$\frac{2}{3}$

find slope ... (0,4) and (3,0)

$\frac{-4}{3}$

a. Write an equation that models part A of the kite.

b. Write an equation that models part B of the kite.

c. Do the kite parts form a right angle? *Justify* your answer.

NO! (not - reciprocal slopes!)

perpendicular?

Homework: Section 5.5

p. 322, 3-27 by 3, 28, 32, 34, 36