Name: Answer Key

Review Slope

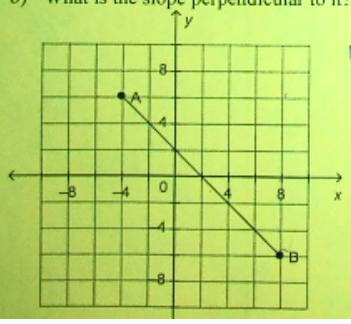
1. Write an equation **(slope intercept form)** for the graph of a linear function that has slope 8 and and a y-intercept of 7.

$y = 8x + 7$

2. Write the equation**(slope intercept form)** of a line with a y-intercept of -4 and a slope of 4/3.

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

3. a) Determine the slope of this line segment.
   b) What is the slope perpendicular to it?



$m = \frac{\text{rise}}{\text{run}}$

$= \frac{6}{-6}$

$= \frac{-1}{1}$

perpendicular $= \frac{+1}{1}$

4. Determine the slope of the line that passes through (–11, –8) and (6, 16).

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

$m = \frac{16 - (-8)}{6 - (-11)}$

$= \frac{16 + 8}{6 + 11}$

$= \frac{24}{17}$

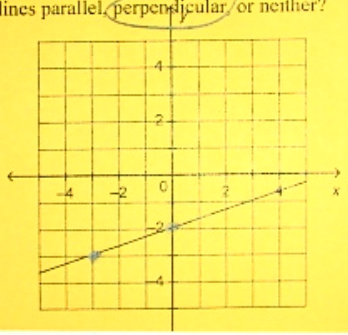
5. The slopes of two lines are $\frac{6}{11}$ and $\frac{6}{11}$. Are the two lines parallel, perpendicular, or neither?

6. The slopes of two lines are $\frac{-2}{1}$ and $\frac{1}{2}$. Are the two lines parallel, perpendicular, or neither?

7. *Slope:* 1/3

y-int *Point:* −2

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



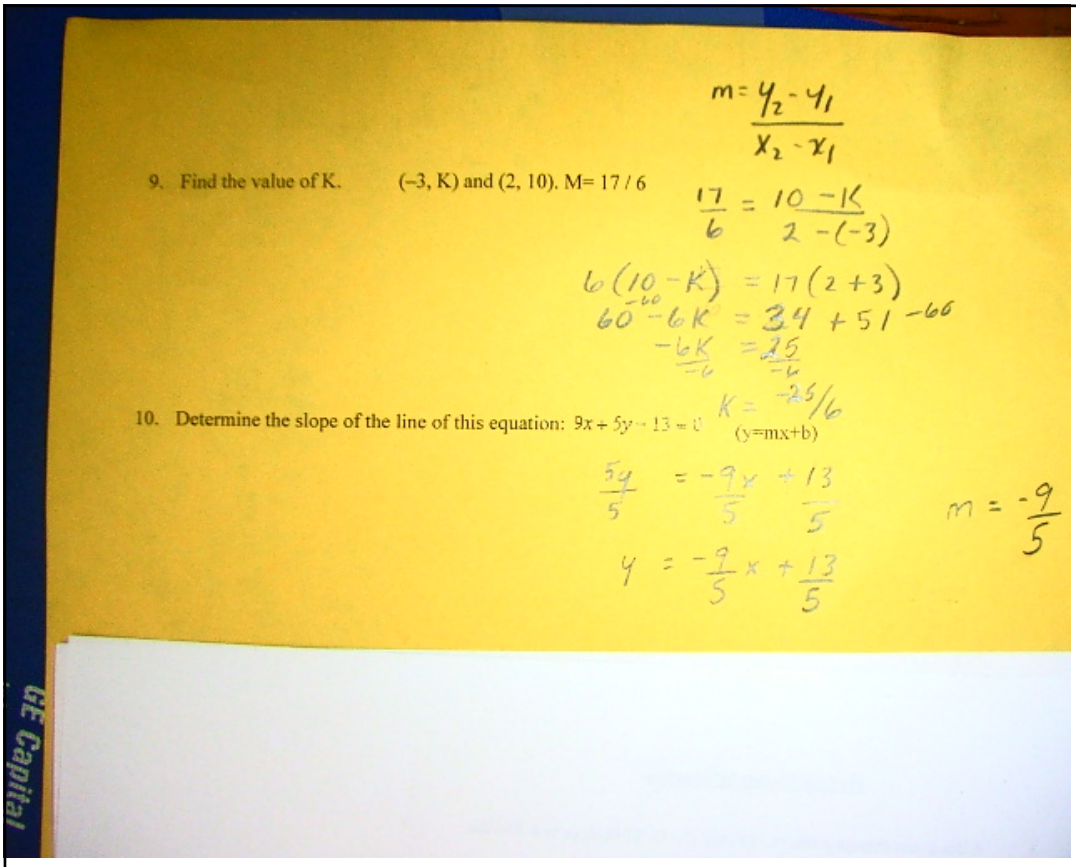
8. Complete the chart:

Equation	Slope	y-intercept
i) $4(x-9)=3(y+3)$	$4/3$	-15
ii) $\frac{2}{3}x+6=7y$	$2/21$	$6/7$
iii) $5(2-y)=10x-30$	$-2/1$	8

i) $4x-36=3y+9$
$\frac{4x}{3}-\frac{45}{3}=\frac{3y}{3}$
$\frac{4}{3}x-15=y$

ii) $\frac{2}{3}x+6=7y$
$\frac{2x}{21}+\frac{18}{21}=\frac{21y}{21}$
$\frac{2x}{21}+\frac{6}{7}=y$

iii) $5(2-y)=10x-30$
$10-5y=10x-30$
$\frac{-5y}{-5}=\frac{10x}{-5}-\frac{40}{-5}$
$y=-2x+8$



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

9. Find the value of K. (–3, K) and (2, 10). M= 17 / 6

$\frac{17}{6} = \frac{10 - K}{2 - (-3)}$

$6(10 - K) = 17(2 + 3)$

$60 - 6K = 34 + 51 - 60$

$\frac{-6K}{-6} = \frac{25}{-6}$

$K = -25/6$

10. Determine the slope of the line of this equation: $9x + 5y - 13 = 0$ (y=mx+b)

$\frac{5y}{5} = \frac{-9x}{5} + \frac{13}{5}$

$y = \frac{-9}{5}x + \frac{13}{5}$

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

GE Capital

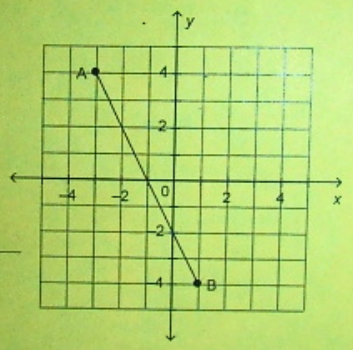
11. a) Determine the *slope* and *y*-intercepts of this equation: $5x + 8y + 40 = 0$ (y=mx+b)

$\frac{8y}{8} = \frac{-5x}{8} - \frac{40}{8}$ $m = -\frac{5}{8}$

$y = -\frac{5}{8}x - 5$ y-int = -5

Problem

12.



Slope: $\frac{8}{-4} = \frac{-2}{1}$

y-int ~~Point:~~ -2

Equation $y = -2x - 2$

(y=mx+b)

13. A line passes through R(6, 9) and K(–6, 15).
   a) What is the slope of line RK?
   b) What is the slope parallel to RK?
   c) What is slope perpendicular to RK.

a) $m_{RK} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{15 - 9}{-6 - 6} = \frac{6}{-12} = -\frac{1}{2}$

b) Parallel $-\frac{1}{2}$

c) Perpendicular $+\frac{2}{1}$

16. Francine runs a T-shirt company. For [illegible]

16. Francine runs a T-shirt company. For each order she receives, Francine charges a flat fee of $50, plus $8.95 per T-shirt.
    a) Write an equation for the total cost, C dollars, for ordering n T-shirts.
    b) George ordered 62 T-shirts. What was the total cost?
    c) Jake paid a total cost of $971.85. How many T-shirts did he order?

a) $C = 8.95n + 50$

b) $C = 8.95n + 50$
$C = 8.95(62) + 50$
$C = 554.9 + 50$
$C = 604.90$

c) $C = 8.95n + 50$
$971.85 = 8.95n + 50$ (−50 −50)
$921.85 = 8.95n$
$\frac{921.85}{8.95} = \frac{8.95n}{8.95}$
$103 = n$

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