

Name: _____

Date: _____

Chapter 6 Review

For each type of question, the achievement level is indicated. Showing work is an important strategy in communicating your knowledge and ideas so please be thorough.

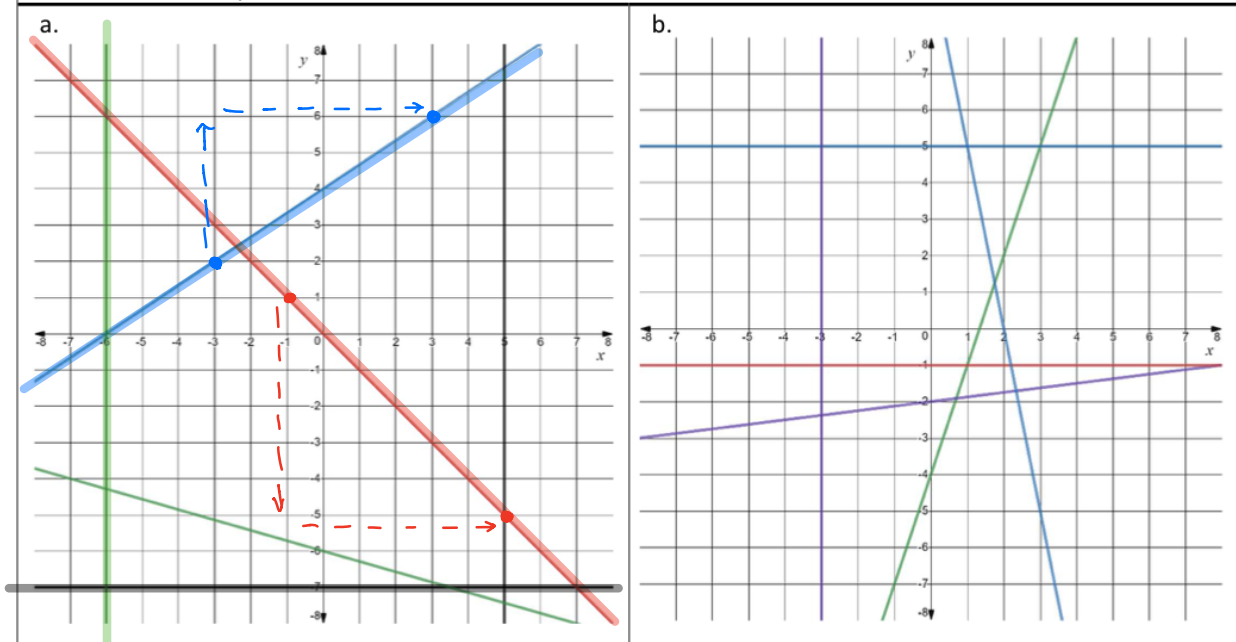
Learning Goal 6.1	Calculating the slope of the line and <ul style="list-style-type: none">Using the slope to graph a line, andApplying the slope to parallel and perpendicular lines.
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Developing

1. Classify the slope of each line segment as positive, negative, zero or undefined.

Proficient

2. Find the slope of the lines.



Red \Rightarrow negative

$$m = \frac{-6}{+6} = -1$$

Blue \Rightarrow positive

$$m = \frac{+4}{+6} = \frac{2}{3}$$

Green \Rightarrow DNE / NS

Black \Rightarrow zero

Proficient	
3. Calculate the slope through the given points.	
a. $M(81, 53)$ $N(48, 36)$	b. $P(10, 13)$ $Q(-14, 53)$
c. $A(63, 76)$ $B(74, 43)$	d. $M(27, 41)$ $N(99, 32)$
e. $X(12, -34)$ $Y(47, -20)$	f. $J(-53, -19)$ $K(-47, 2)$

①

②

$$\begin{aligned}
 m &= \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - (-19)}{-47 - (-53)} \\
 &= \frac{2 + 19}{-47 + 53} \\
 &= \frac{21}{6}
 \end{aligned}$$

Developing		
4. Given the original slope of a line,		
a. State the slope of a line that would be parallel.	b. State the slope of a line that would be perpendicular.	
$\frac{1}{2}$	$-\frac{3}{5}$	$-\frac{3}{2}$
$\frac{8}{7}$	3	-8
1	0	DNE

Original	parallel	perpendicular $-\frac{1}{m}$
$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{2}{1} = -2$
-8	-8	$\frac{1}{8}$
0	0	DNE / NS

Proficient	
5. Find the slope of a line that is:	
a. Parallel to a line through the points A(63,76) and B(74,43) P(10,13) and Q(-14,53) J(-53,-19) and K(-47,2)	b. Perpendicular to a line through the points ① X(12,-34) and Y(47,-20) ② F(81,53) and G(48,36) M(27,41) and N(99,32)
Extending	
the origin and (15,-3)	the origin and (-6,-12)

$(0,0)$ ②
 a. $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $= \frac{0 - (-3)}{0 - (15)}$
 $= \frac{0 + 3}{0 - 15}$
 $= \frac{-3}{15}$
 $= -\frac{1}{5}$

①
 $m = -\frac{1}{5}$

b. $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $= \frac{-20 - (-34)}{47 - (12)}$
 $= \frac{-20 + 34}{47 - 12}$
 $= \frac{14}{35}$
 $= \frac{2}{5}$

$\perp m = -\frac{5}{2}$