Ch. 2 Test

2 Domain/Range/Functions
2 Evaluating f(x) or g(x)

$g(x) = 5|-2x+3|$ Find $g(4)$

$g(4) = 5|-2\cdot4+3|$

$5|-5| = 5\cdot5$

$\boxed{g(4) = 25}$

4 Direct Variation

$\boxed{y = kx}$ $\boxed{k = \frac{y}{x}}$

6 Graph (eq./inequality)
3 lines, 3 abs. value

3 WTEOTL
3 word problems
3 Slope

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

Parallel: same slope
$\perp$: opposite perpendicular reciprocals

ex $y = \frac{2}{5}x + 1$

$\boxed{m_{\parallel} = \frac{2}{5}}$ $\boxed{m_{\perp} = -\frac{5}{2}}$

6 Abs. Value (shifts, reflections, vertex) eq., graph

1 Scatter Plot/trend line/eq. from calculator

L_1	x	-5	-2	-1	1	3	6
L_2	y	22	15	12	8	7	5

Stat edit

2nd mode

stat → CALC
#4 LinReg.

$y = -1.5398x + 12.0133$

Ch. 2 Review

① WTEOTL in slope-intercept through $(-5, -1)$ with a slope of $\frac{1}{10}$.

x_1, y_1

point-slope: $y - y_1 = m(x - x_1)$

$y + (+1) = \frac{1}{10}(x + +5)$

$y + 1 = \frac{1}{10}(x + 5)$

$y + 1 = \frac{1}{10}x + .5$

$-1 \quad -1$

$y = \frac{1}{10}x - .5$

② WTEOTL in slope-intercept form $(-2, 4)$ and $(-3, 6)$

x_2, y_2 $\quad x_1, y_1$

1st: $m = \frac{y_2 - y_1}{x_2 - x_1}$ $\quad m = \frac{4 - 6}{-2 + +3} = \frac{-2}{1}$

$m = -2$

2nd: point-slope

$y - 6 = -2(x + +3)$

$y - 6 = -2x - 6$

$+6 \quad +6$

$y = -2x$

(3) Find the constant of variation. Then find the value of y when $x = \frac{1}{3}$.

$y = 9$ when $x = 12$.

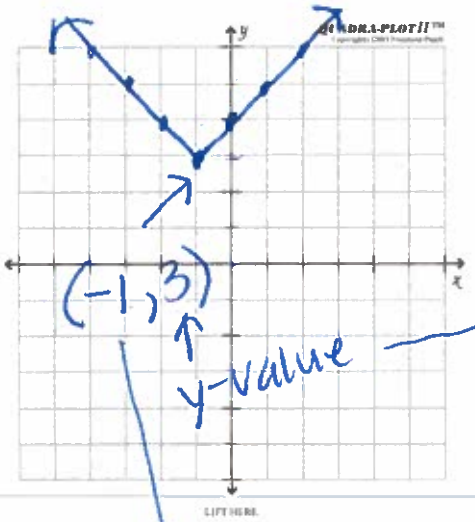
$K = \frac{y}{x}$

$K = \frac{9}{12}$ ↑ reduce

$K = \frac{3}{4}$ OR .75

$y = Kx$

$y = \frac{3}{4} \cdot \frac{1}{3} = \frac{1}{4}$ OR .25



D: $(-\infty, \infty)$

R: $[3, \infty)$

equation:

$y = 1|x+1| + 3$

Ch. 2 Test Review

Day 25

Warm-ups:

p. 100

#7

#8

#9 a. Find the linear model using the graphing calculator

$y = .875x - 1.786$

Find the slope of the line

$6x - 4y = 12$

WTEOTL through $(-3, 4)$ parallel to $y = 2x - 5$

$y = |-4x - 3| + 2$ $\left(-\frac{3}{4}, 2\right)$ Vertex

$-4x - 3 = 0$

$+3 \quad +3$

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

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

WTEOTL through $(-2, 1)$
parallel to $y = -3x + 1$

$m = -3$ $(-2, 1)$

$$y - 1 = -3(x + 2)$$

$$y - 1 = -3x - 6$$

$$+1 \qquad +1$$

$$\boxed{y = -3x - 5}$$

Name _____

Fall 2016

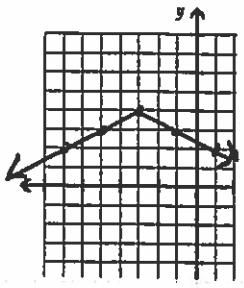
Ch. 2 Review

Date _____ Block ____

Find the domain and range. Is it a Function?

① $\{(5,0),(8,1),(1,3),(5,2),(3,8)\}$ D:
yes or no? R:

②



D:
R:
yes or no?
equation?

Suppose $f(x) = 2x-5$, $g(x) = |-3x-1|$

③ Find $g(2)$

④ Find $f(-7)$

⑤ p. 75 # 28

⑥ p. 75 # 31

⑦ p. 75 # 44

⑧ p. 75 # 45

⑨ p. 112 # 26

⑩ p. 112 # 12

⑪ p. 112 # 13

⑫ p. 112 # 14

Graph the following. Solve 1st, If Necessary

⑬ $y = \frac{2}{3}x + 1$

⑭ $y = x$

⑮ $x - y > 3$

⑯ $y = -2|x| + 1$

⑰ $y = |x+4| - 5$

⑱ $y \geq \frac{2}{3}|x|$

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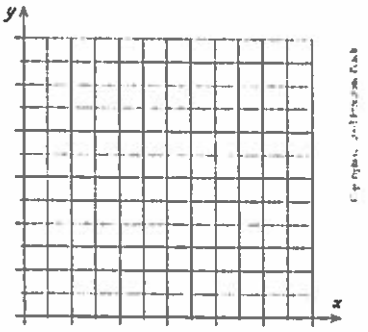
(19) p. 68 # 31

(20) p. 68 # 38

(21) p. 68 # 41

(22) p. 83 #22

(23) p. 111 #27
a) make scatter plot
b) draw trend line if appropriate
c.) Find linear equation using your graphing calculator



(24) Find the vertex.
$y = |-4x - 3| + 2$