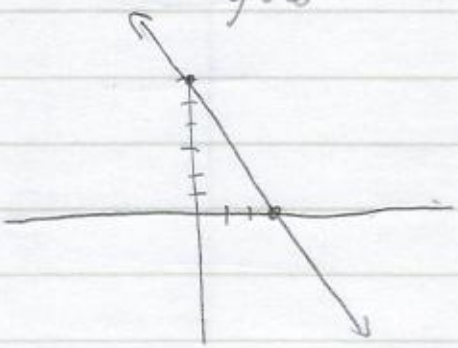
Test 1 Solution Guide - pg 1

1. x-int $0 = -2x + 6$
$-6 = -2x$
$3 = x$

y-int $y = -2 \cdot 0 + 6$
$y = 6$



2. $3x + 2 = 23$
$-2 \quad -2$
$3x = 21$
$x = 7$

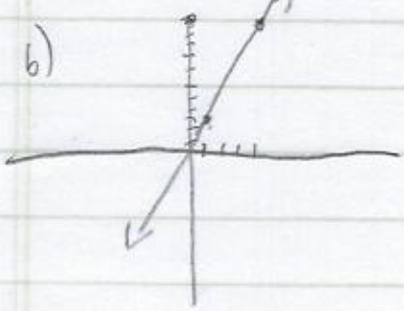
3. $5x + 1 = 2x - 17$
$-1 \qquad -1$
$5x = 2x - 18$
$-2x \quad -2x$
$3x = -18$
$x = -6$

4. $y - y_1 = m(x - x_1)$
$y - 5 = 3(x - 2)$
$y - 5 = 3x - 6$
$+5 \quad +5$
$y = 3x - 1$

Test 1 Soln Guide pg ②

5. a) $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{12 - 3}{4 - 1} = \frac{9}{3} = \boxed{3}$

b)



c) $y - 3 = 3(x - 1)$

$y - 3 = 3x - 3$

$+3 \qquad +3$

$y = 3x + 0$

$\boxed{0}$

6. a) $f(2) = \boxed{2}^2 + 3 \cdot \boxed{2} + 1$

$= 4 + 6 + 1$

$= (11)$

b) $3 \longmapsto \boxed{3}^2 + 3 \cdot \boxed{3} + 1$

$9 + 9 + 1$

(19)

c) $f(-1) = \boxed{-1}^2 + 3\boxed{-1} + 1$

$= 1 - 3 + 1$

$= \boxed{-1}$

7. a) $f(A) = 10$

b) $C \xrightarrow{f} 13$

c) $f(13) =$ NOPE

d) $f(D) = 17$

8. $4x + 2y = 16$

$-4x \quad -4x$

$\frac{2y}{2} = \frac{-4x + 16}{2}$

$y = -2x + 8$

$m = 2$ $\quad$ y-int: 8

9. Line has slope 2

So $\perp$ has slope $-\frac{1}{2}$

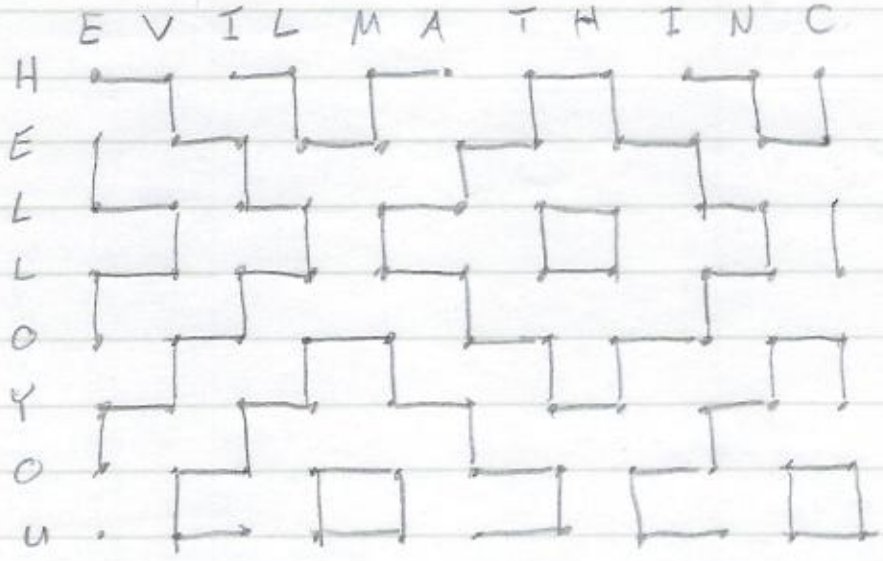
10. a) Pts $(0, 6)$ $(4, 0)$ — (x_1, y_1) (x_2, y_2)

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{0 - 6}{4 - 0} = \frac{-6}{4} = -\frac{3}{2}$

b) x-int 4

c) y-int 6

11.



Vowel = off = · —

Consonant = on = —o ·