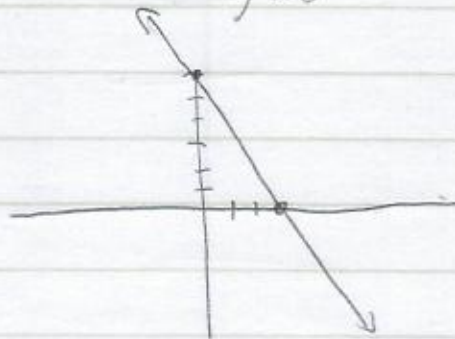


Test 1 Solution Guide - pg ①

1. x-int $0 = -2x + 6$
 $\begin{array}{r} 0 = -2x + 6 \\ -6 \quad -6 \\ \hline -6 = -2x \\ -2 \quad -2 \\ \hline 3 = x \end{array}$

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

x-int 3 pts
y-int 3 pts
graph 4 pts



2. $3x + 2 = 23$
 $\begin{array}{r} 3x + 2 = 23 \\ -2 \quad -2 \\ \hline 3x = 21 \\ \frac{3x}{3} = \frac{21}{3} \\ x = 7 \end{array}$ 4 pts
4 pts
2 pts answer

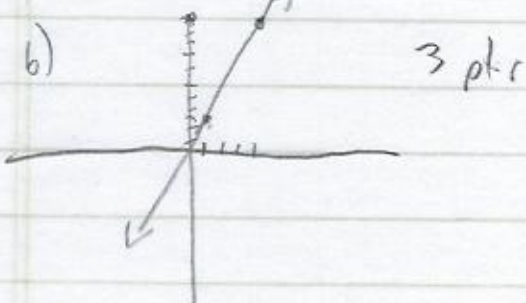
3. $5x + 1 = 2x - 17$
 $\begin{array}{r} 5x + 1 = 2x - 17 \\ -1 \quad -1 \\ \hline 5x = 2x - 18 \\ -2x \quad -2x \\ \hline 3x = -18 \\ \frac{3x}{3} = \frac{-18}{3} \\ x = -6 \end{array}$ 3 pts subtract
3 pts subtract
3 pts divide
1 pts answer

4. $y - y_1 = m(x - x_1)$ pt-slope
 $y - 5 = 3(x - 2)$ 5 pts eqn
 $y - 5 = 3x - 6$ 2 pts plus in
 $\begin{array}{r} y - 5 = 3x - 6 \\ +5 \quad +5 \\ \hline y = 3x - 1 \end{array}$ 3 pts solve y.
 $y = mx + b$ solve b
5 pts eqn
2 pts plus in
2 pts solve b
1 pt wr. the eqn

Test 1 Soln Guide pg ②

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

4 pts
2 pts eqn
2 pts eval



c)

$$y - 3 = 3(x - 1) \quad 3 \text{ pts}$$

$$\begin{array}{r} y - 3 = 3x - 3 \\ y - 3 + 3 = 3x - 3 + 3 \\ \hline y = 3x + 0 \end{array}$$

$\boxed{0}$

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

$$= 4 + 6 + 1$$

$$= \boxed{11}$$

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

$$= 9 + 9 + 1$$

$$= \boxed{19}$$

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

$$= 1 - 3 + 1$$

$$= \boxed{-1}$$

7. 2 a) $f(A) = 10$

3 b) $C \xrightarrow{f} 13$

3 c) $f(13) = \text{NOPE}$ (Give -1 for c, i.e. $f'(13)$)

2 d) $f(D) = 17$

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10 pts 8. $4x + 2y = 16$

$$\begin{array}{r} -4x \quad -4x \\ \hline 2y = -4x + 16 \\ \hline \end{array}$$

- 3 Subtract x
- 3 divide by 2
- 2 simplify
- 2 find m, b

$y = -2x + 8$
 $m = -2$ $y\text{-int} = 8$

20 pts 9. Line has slope 2

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

- 5 pts read slope
- 3 pts $m_{\perp} = -\frac{1}{m}$ formula
- 2 pts answer

4 10. a) pts $(x_1, y_1) = (0, 6)$ $(x_2, y_2) = (4, 0)$

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

3 b) x-int 4

2 c) y-int 8



Vowel = o f f = . . .

Consonant = n = . . .