Practice (6.3A)

(KEY)

1. Consider the linear equation $y = 3x - 1$.
    a) Make a table of values using $x = -2, -1, 0, 1, 2$.
    b) Graph the ordered pairs from the table.
    c) Use the equation to calculate y when $x = 4$.
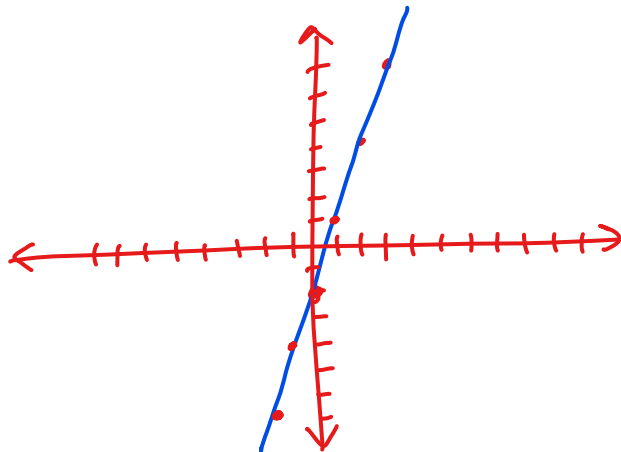   **d)** For the point $(x, -10)$, what is the value of x?

a)

x	y
-2	-7
-1	-4
0	-1
1	2
2	5

Ex/ $y = 3x - 1$
$y = 3(-2) - 1$
$= -6 \quad -7$
$= \quad -7$

b)

$(x, -10)$

c) $y = 3x - 1$
$y = 3(4) - 1$
$= 12 - 1$
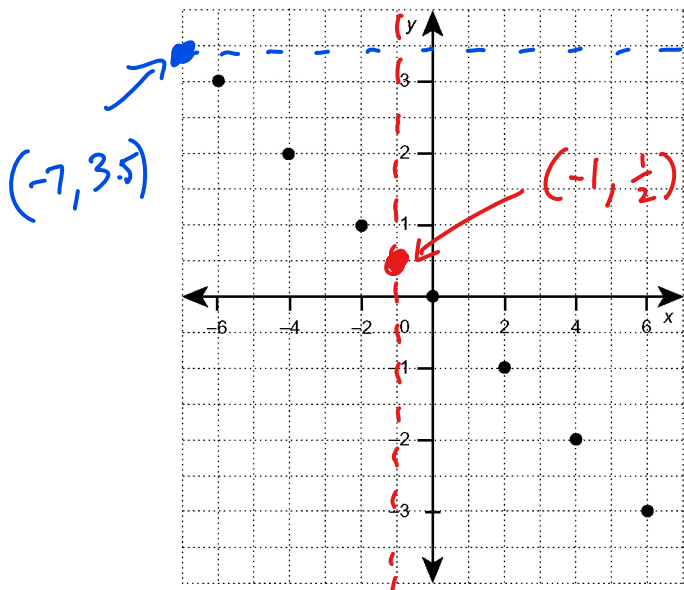$\boxed{y = \quad 11}$

d) $y = 3x - 1$
$(-10) = 3x - 1$
$-10 = 3x - 1$
$\quad +1 \qquad +1$
$\dfrac{-9}{3} = \dfrac{3x}{3}$
$\boxed{-3 = \quad x}$

2. The graph below represents part of the linear relation $y = \frac{x}{-2}$.

(handwritten: $(-7, 3.5)$)

a) Use the graph to estimate y when $x = -1$.

(handwritten: $y = \frac{1}{2}$)

b) Use the equation to calculate y when $x = 16$.

(handwritten: $y = \frac{x}{-2}$ | $y = \frac{(16)}{-2}$ | $y = -8$)

c) For the point $(x, 3.5)$, estimate the value of x from the graph.

(handwritten: $y = 3.5$ | $x = -7$)

3. a) Graph the ordered pairs from the table of values.

x	0	1	2	3	4
y	0	1	4	9	16

(handwritten annotations: +1 between each x; +1, +3, +5, +7 between y values)

b) Is this a linear relation? Use two different ways to explain your answer.

(handwritten graph with curve)
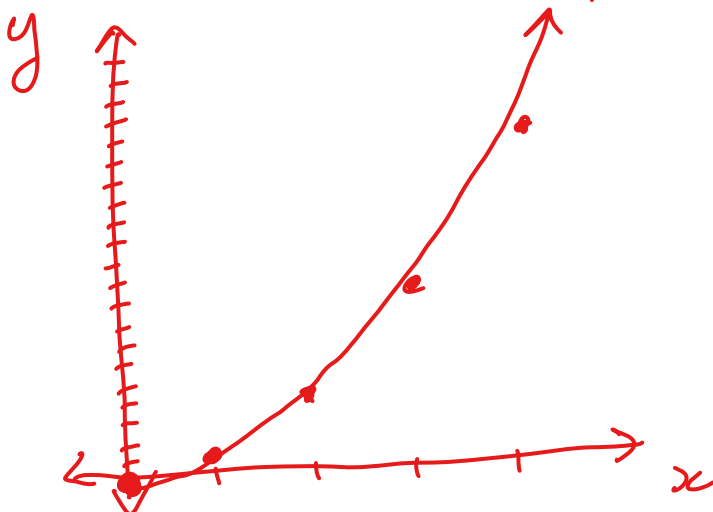
(handwritten: I) No, because the points are not on a straight line)

(handwritten: II) No, because $\frac{1}{1} \neq \frac{3}{1} \neq \frac{5}{1} \neq \frac{7}{1}$)