

* Part "Shark" continued.

17.) QR equation: $y = \frac{1}{2}x - 1$

$$y - y_1 = m(x - x_1)$$

$$y - (-3) = \frac{1}{2}(x - (-4))$$

$$y + 3 = \frac{1}{2}(x + 4)$$

$$y + 3 = \frac{1}{2}x - 2$$

$$y = \frac{1}{2}x - 5$$

x	y
-4	-3
-6	-2

$\Delta x = -2$ $\Delta y = +1$

$$m = \frac{\Delta y}{\Delta x} = \frac{1}{-2} = -\frac{1}{2}$$

18.) RS equation: $x = -6$

$$y - y_1 = m(x - x_1)$$

* since the slope is undefined the line is vertical

x	y
-6	-2
-6	-7

$\Delta x = 0$ $\Delta y = +5$

$$m = \frac{\Delta y}{\Delta x} = \frac{5}{0} = \text{undefined}$$

* Part 19.) ST equation: $y = -x - 13$

$$y - y_1 = m(x - x_1)$$

$$y - (-7) = -1(x - (-6))$$

$$y + 7 = -x - 6$$

$$y = -x - 13$$

x	y
-6	-7
-8	-5

$\Delta x = -2$ $\Delta y = +2$

$$m = \frac{\Delta y}{\Delta x} = \frac{2}{-2} = -1$$

20) TU equation: $y = -3x - 29$

$$y - y_1 = m(x - x_1)$$

$$y - (-2) = -3(x - 39)$$

$$y + 2 = -3x + 117$$

$$y = -3x + 115$$

$$y = -3x - 29$$

x	y
-8	-5
-9	-2

$$m = \frac{\Delta y}{\Delta x} = \frac{-3}{-1} = 3$$

21) UV equation: $y = \frac{1}{4}x - \frac{17}{4}$

$$y - y_1 = m(x - x_1)$$

$$y - (-1) = -\frac{1}{4}(x - \frac{13}{3})$$

$$y + 1 = -\frac{1}{4}x + \frac{13}{12}$$

$$y = -\frac{1}{4}x - \frac{17}{12}$$

$$y = -\frac{1}{4}x - \frac{17}{12}$$

x	y
-9	-2
-13	-1

$$m = \frac{\Delta y}{\Delta x} = \frac{-4}{-1} = 4$$

22) VW equation: $y = \frac{1}{2}x + \frac{1}{2}$

x	y
-13	-1
-11	0

$$m = \frac{\Delta y}{\Delta x} = \frac{1}{2}$$

$$y - y_1 = m(x - x_1)$$

$$y - 0 = \frac{1}{2}(x - (-11))$$

$$y = \frac{1}{2}x + \frac{11}{2}$$