

1. Determine whether each function is linear or no linear. If the function is linear, determine the equation of the line.

x	-4	-2	0	2	4
y	14	11	8	5	2

linear

~~AB~~
 $y = -\frac{3}{2}x + 8$

x	0	1	2	3	4
y	1	3	4	8	16

non linear

Find the stated information about each quadratic function.

$3x^2 - 12x + 8$

2. $f(x) = 3(x-2)^2 - 4$

a. opens up or down?

UP

b. axis of symmetry

$x = 2$

c. Vertex

$(2, -4)$

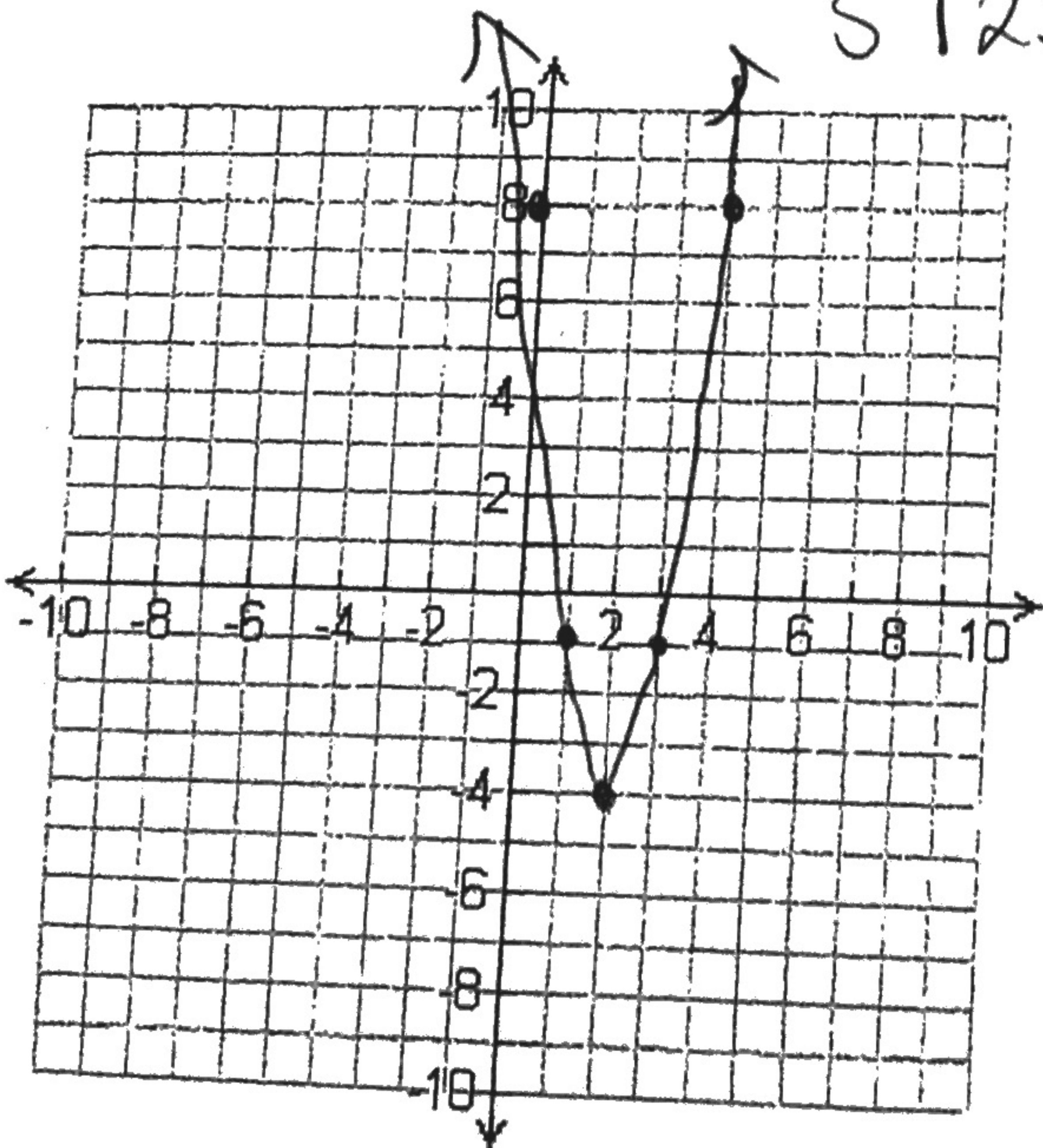
d. Domain =

\mathbb{R}

Range =

$y \geq -4$

e. Graph the function



3. $f(x) = -x^2 - 2x + 6$

a. opens up or down?

DOWN

b. axis of symmetry

$\frac{-b}{2a} \rightarrow \frac{-(-2)}{2(-1)} = \frac{2}{-2} = -1 = x$

c. Vertex

$(-1, 7)$

d. Domain =

\mathbb{R}

Range =

$y \leq 7$

e. Graph the function

x	f(x)
-2	6
-3	3
-4	-2

