

9.1 pg. 549 #7-9 all, 10-28 even

(graph use domains -2 to +2)

7.) Vertex = (2, 3); maximum

8.) Vertex = (-3, -2); minimum

9.) Vertex = (2, 0); minimum

10.) $y = -4x^2$

x	y
2	-16
1	-4
0	0
-1	-4
-2	-16

domain = $\mathbb{R}, (-\infty, \infty)$
range = $y \leq 0, (-\infty, 0]$

12.) $f(x) = 3x^2$

x	y
2	12
1	3
0	0
-1	3
-2	12

domain = $\mathbb{R}, (-\infty, \infty)$
range = $f(x) \geq 0, [0, \infty)$

14.) $y = -\frac{1}{2}x^2$

x	y
2	-2
1	$-\frac{1}{2}$
0	0
-1	$-\frac{1}{2}$
-2	-2

domain = $\mathbb{R}, (-\infty, \infty)$
range = $y \leq 0, (-\infty, 0]$

16) *If $a > 1$, the narrower the parabola will be narrower

$0 < a < 1$ the parabola will be wider

$y = 2x^2$ (widest)
 $y = 3x^2$
 $y = 4x^2$

$$18) y = -\frac{1}{4}x^2, y = \frac{1}{2}x^2, y = 5x^2$$

$$20) f(x) = x^2 + 4$$

x	y
-2	8
-1	5
0	4
1	5
2	8

$$22) y = \frac{1}{2}x^2 + 2$$

x	y
-2	4
-1	2½
0	2
1	2½
2	4

$$24) y = -2x^2 + 4$$

x	y
-2	-4
-1	2
0	4
1	2
2	-4

$$26) h = -16t^2 + 40$$

$$0 = -16t^2 + 40$$

$$-40 = -16t^2$$

$$\frac{-40}{-16} = \frac{-16t^2}{-16}$$

$$\sqrt{2.5} = \sqrt{t^2}$$

$$28) y = -2x^2 + 1$$

x	y
-2	-7
-1	-1
0	1
1	-1
2	-7

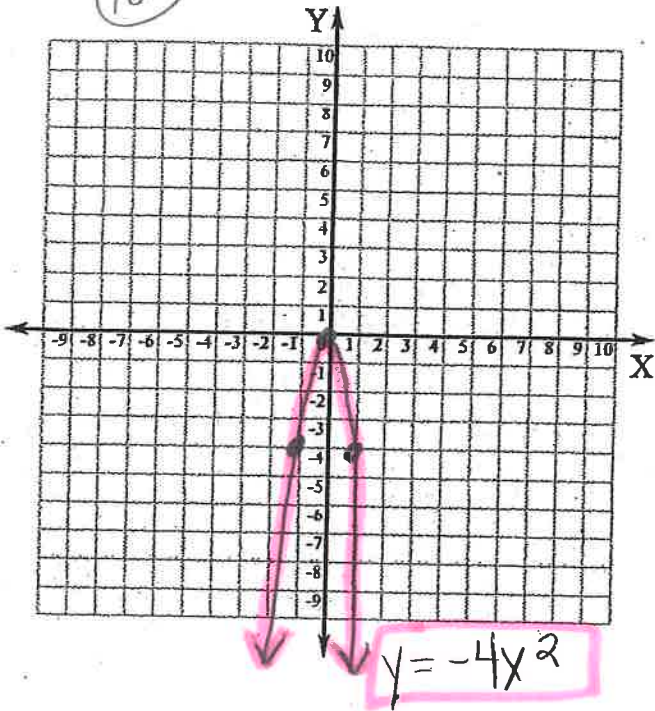
$$t \approx 1.58 \text{ seconds}$$

or

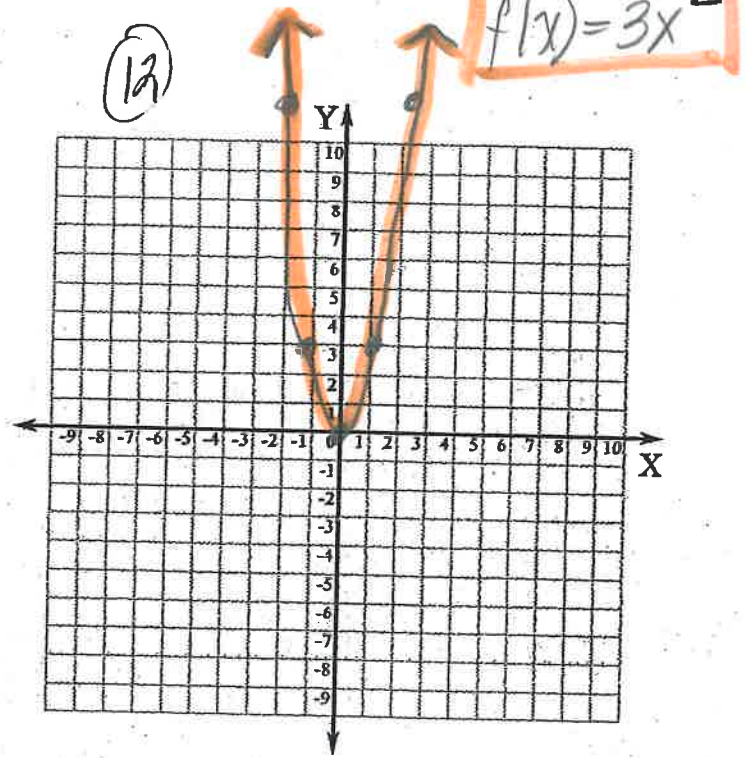
1.6 seconds

* The parabola
Should be open
downward

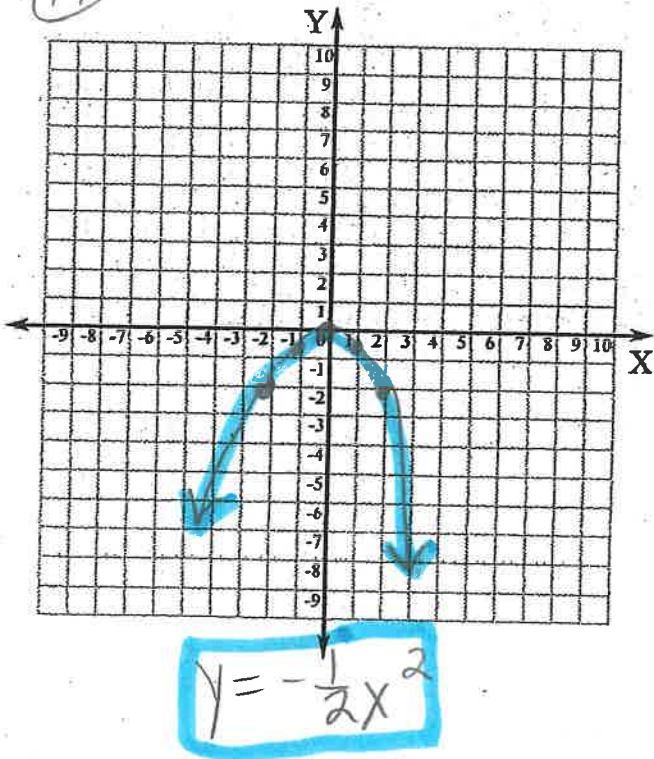
(10)



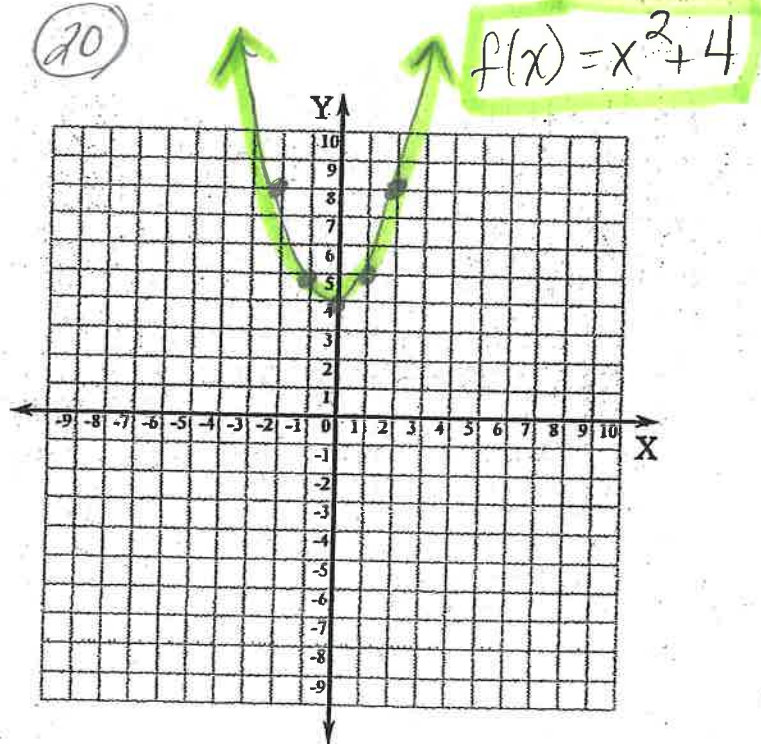
(12)



(14)

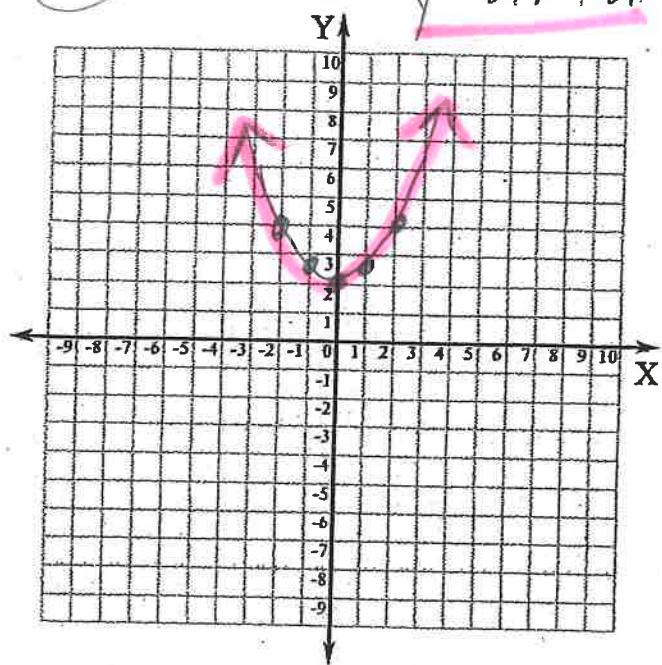


(20)

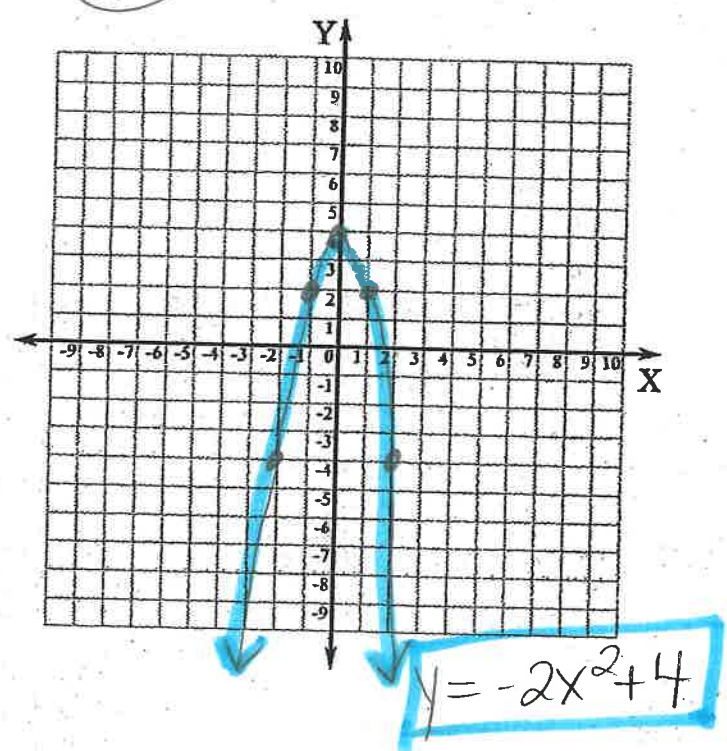


22

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



24



$y = -2x^2 + 4$

