Parabolas

Friday, October 6, 2017 1:27 PM

1. old.

$y = a(x-h)^2 + k$

- vtx (h, k)

1 | a 2 | 4a

$x = a(y-k)^2 + h$

vtx: (h, k)

$a > 0$: 1 —a→ 2 —4a→

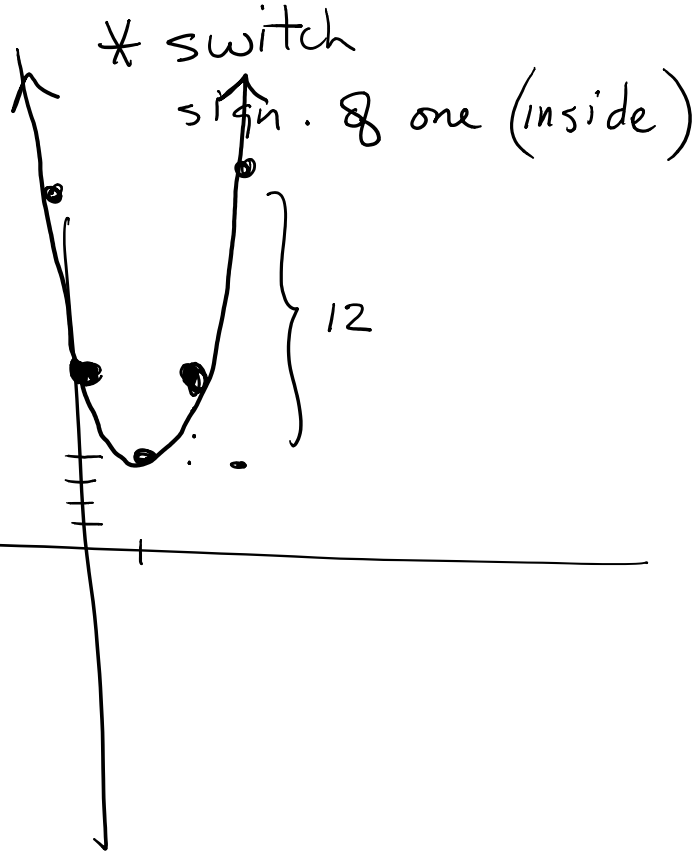
$a < 0$: ←a— 1 ←4a— 2

2.

old.

$y = 3(x-1)^2 + 4$

vtx $(1, 4)$



3. $x = -4(y+1)^2 + 2$

because $a = -4$

vtx $(2, -1)$

4 | 1 -16 | 1

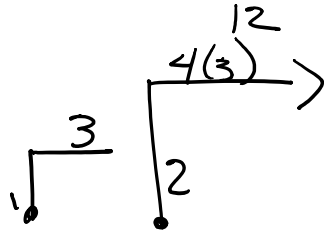
4. $x - 3y^2 + 6y + 7 = 0$

$x = +3y^2 - 6y \quad -7$

$3(y^2 - 2y + 1) \quad -3$

$3(y-1)^2 - 10$

vtx $(-10, 1)$



5. $5x = y^2 + 10y + 80$

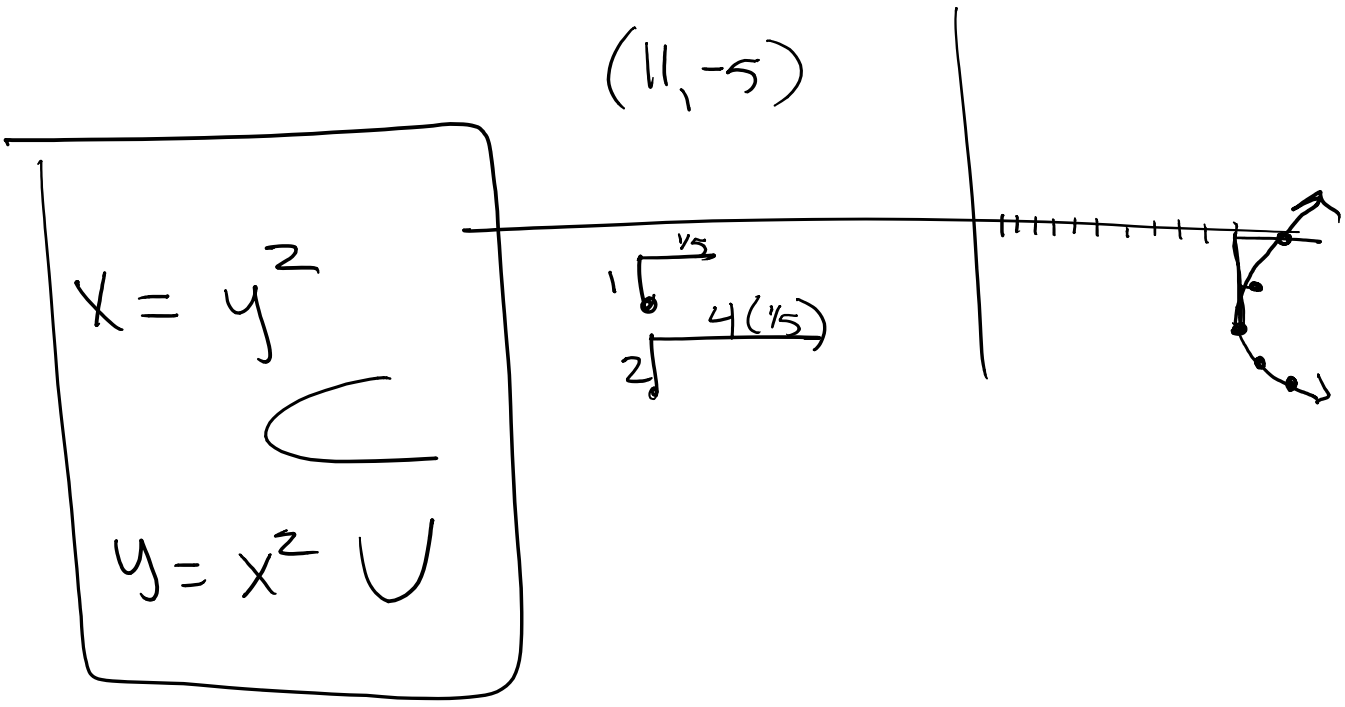
$y^2 + 10y + 25 \quad +80$

-25

$\frac{5x'}{5} = \frac{(y+5)^2}{5} + \frac{55}{5}$

$x = \frac{1}{5}(y+5)^2 \; 11$

$(11, -5)$


(11, -5)
$x = y^2$
$y = x^2$
1
2
1/5
4(1/5)