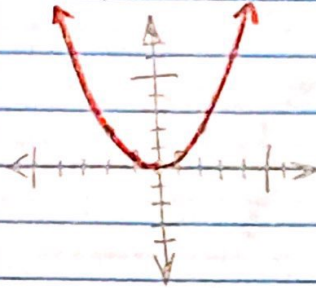


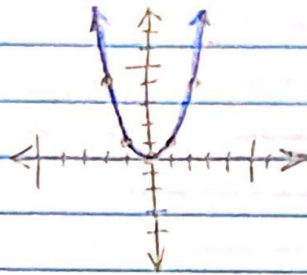
# Quadratics - Stretch/Shrink and Review Factoring

$$f(x) = \frac{1}{2}x^2$$



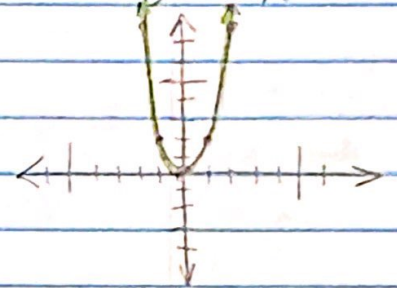
vertical  
shrink  
by  $\frac{1}{2}$   
(half as steep)

$$f(x) = x^2$$



parent  
function

$$f(x) = 2x^2$$



vertical  
stretch  
by 2  
(twice as steep)

## ★ Review Factoring

- GCF

Ex. 1  $5x^2 + 15x - 10$   
 $= 5(x^2 + 3x - 2)$

Ex. 2  $-2x^2 + 10x$   
 $= -2(x^2 - 5x)$   
 $= -2x(x - 5)$

- Difference of Two Squares / Perfect Square Trinomials

Ex. 3  $x^2 - 144$   
 $= (x + 12)(x - 12)$

Ex. 4  $x^2 - 8x + 16$   
 $= (x - 4)(x - 4) = (x - 4)^2$

- Trinomials

Ex. 5  $2x^2 + x - 15$   
 $= \frac{(2x+6)(2x-5)}{2}$

$$= (x+3)(2x-5)$$

(30)
1 30
2 15
3 10
<u>5 +6</u>