

# HW 66

1. a) VF  
b) FF  
c) VF  
d) none  
e) FF  
f) GF

2. a) (2,3)

b) (-4,-2) graphs on last page

c) (5,4)

for #2-5

3. a)  $x = -1, 2$

b)  $x = 2, -3$

c)  $x = 2, 5$

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

$$y = x^2 - 4x + 4 + 3$$

$$y = x^2 - 4x + 7$$

b)  $y = 0.5(x+4)(x+4) - 2$

$$y = 0.5(x^2 + 8x + 16) - 2$$

$$y = \frac{1}{2}x^2 + 4x + 8 - 2$$

$$y = \frac{1}{2}x^2 + 4x + 6$$

c)  $y = 4 - 2(x-5)(x-5)$

$$y = 4 - 2(x^2 - 10x + 25)$$

$$y = 4 - 2x^2 + 20x - 50$$

$$y = -2x^2 + 20x - 46$$

5. a)  $y = x^2 + x - 2x - 2$

$$y = x^2 - x - 2$$

b)  $y = \frac{1}{2}(x^2 - 2x + 3x - 6)$

$$y = \frac{1}{2}(x^2 + x - 6)$$

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

c)  $y = -2(x^2 - 7x + 10)$

$$y = -2x^2 + 14x - 20$$

6. a) vertex: (4.5, 19)

$$x = 4.5$$

b) maximum