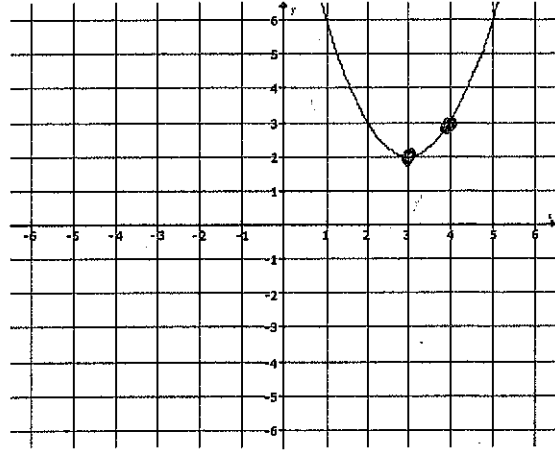
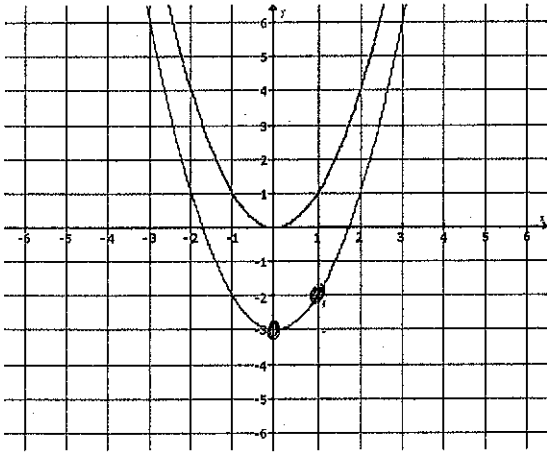


Put each parabola in vertex  $(y=a(x-h)^2+k)$  and standard  $(ax^2+bx+c)$  form.

TRANSFORM PARABOLAS

V: (0, -3)  
P: (1, -2)

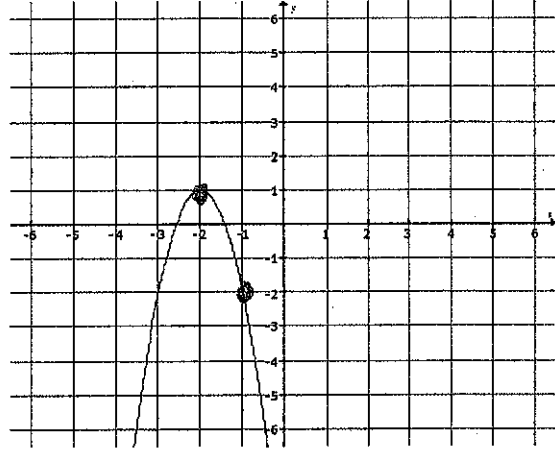
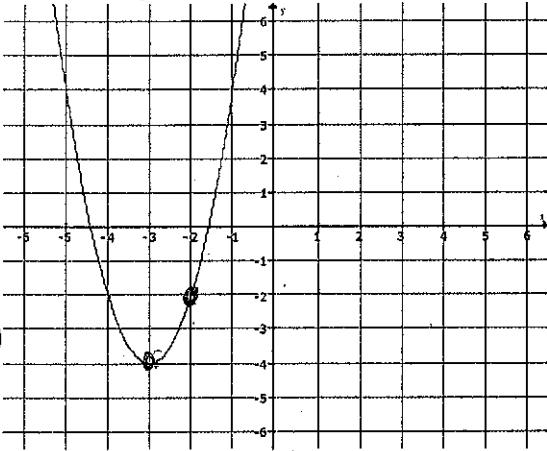


V: (3, 2)  
P: (4, 3)

1.  $y = 1(x-0)^2 - 3$   
 $y = x^2 - 3$

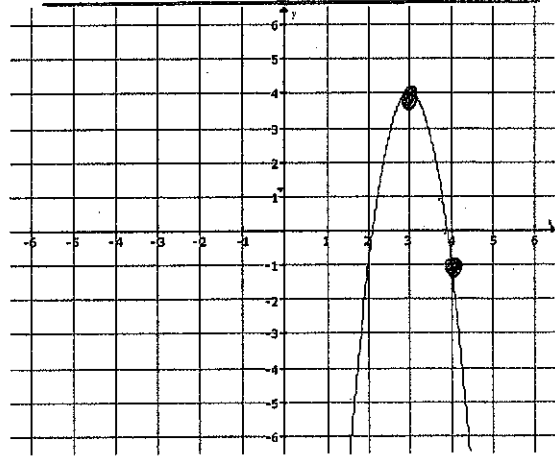
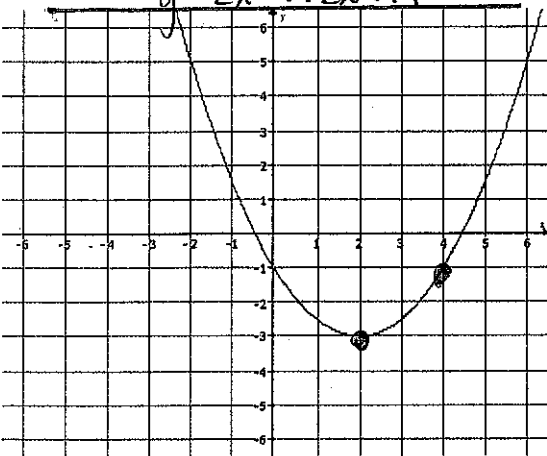
2.  $y = 1(x-3)^2 + 2$   
 $y = x^2 - 6x + 11$

V: (-3, -4)  
P: (-2, -2)



3.  $y = 2(x+3)^2 - 4$   
 $y = 2x^2 + 12x + 14$

4. \_\_\_\_\_  
\_\_\_\_\_



5. \_\_\_\_\_  
\_\_\_\_\_

6. \_\_\_\_\_  
\_\_\_\_\_

$$1. y = a(x-0)^2 - 3$$

$$\downarrow -2 = a(1-0)^2 - 3$$

$$() -2 = a(1)^2 - 3$$

$$x^2 -2 = a \cdot 1 - 3$$

$$M -2 = a - 3$$

$$\text{solve } +3 \quad +3$$

$$1 = a$$

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

$$3 = a(4-3)^2 + 2$$

$$() 3 = a(1)^2 + 2$$

$$x^2 3 = a \cdot 1 + 2$$

$$M 3 = a + 2$$

$$\text{solve } -2 \quad -2$$

$$1 = a$$

$x^2$

M

A

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

$$y = 1(x^2 - 6x + 9) + 2$$

$$y = x^2 - 6x + 9 + 2$$

$$y = x^2 - 6x + 11$$

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

$$\downarrow -2 = a(-2+3)^2 - 4$$

$$() -2 = a(1)^2 - 4$$

$$x^2 -2 = a \cdot 1 - 4$$

$$M -2 = a - 4$$

$$\text{solve } +4 \quad +4$$

$$2 = a$$

$x^2$

M

S

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

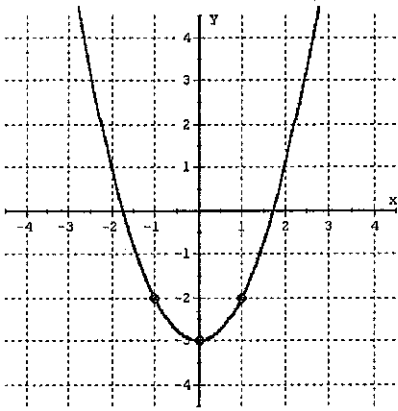
$$y = 2(x^2 + 6x + 9) - 4$$

$$y = 2x^2 + 12x + 18 - 4$$

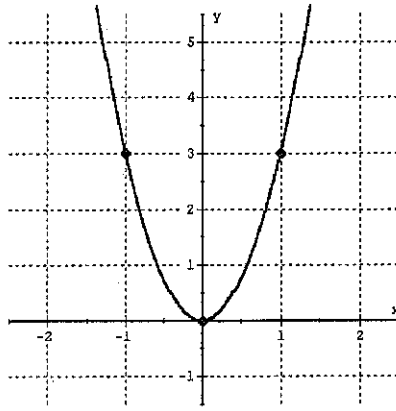
$$y = 2x^2 + 12x + 14$$

## Transformation Worksheet II

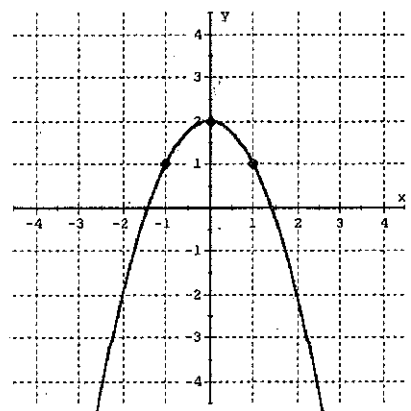
Find an equation of each parabola and put in the form:  $y = a(x - h)^2 + k$  and Standard Form.



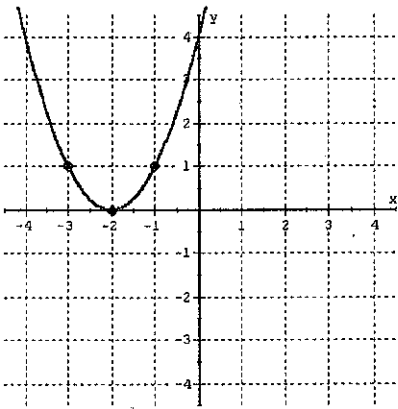
1) \_\_\_\_\_



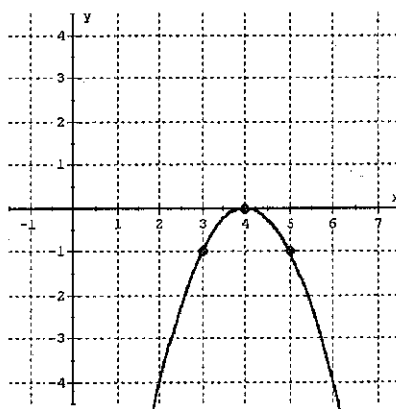
2) \_\_\_\_\_



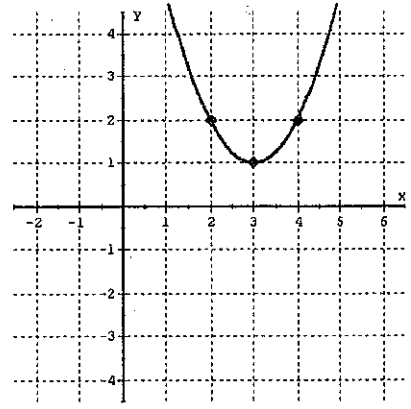
3) \_\_\_\_\_



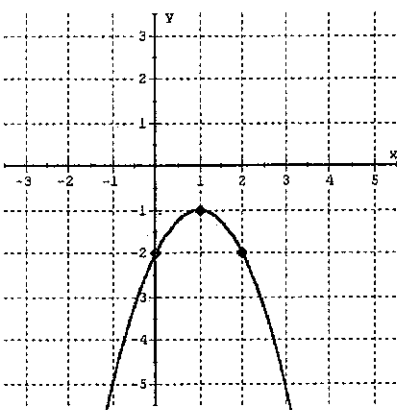
4) \_\_\_\_\_



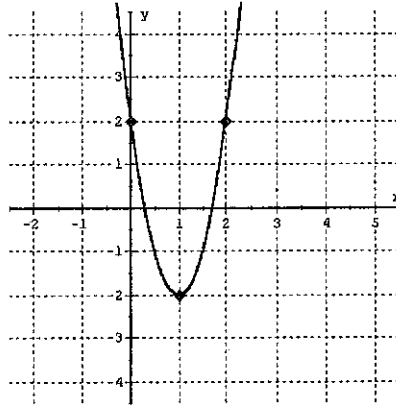
5) \_\_\_\_\_



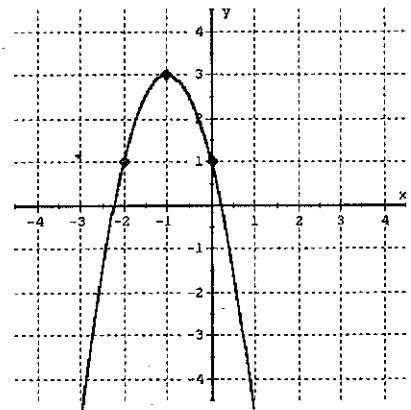
6) \_\_\_\_\_



7) \_\_\_\_\_



8) \_\_\_\_\_



9) \_\_\_\_\_