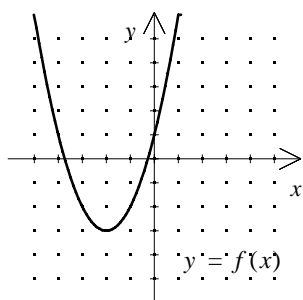
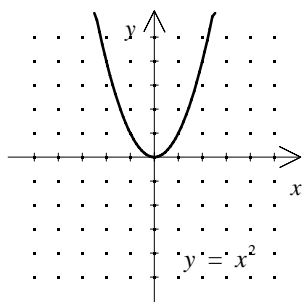


NAME: _____

1. Which describes the translation from $y = x^2$ to $y = (x+2)^2 - 1$?

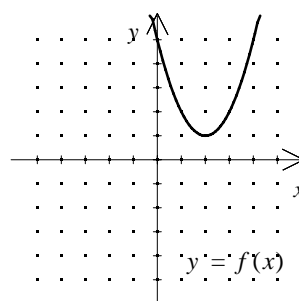
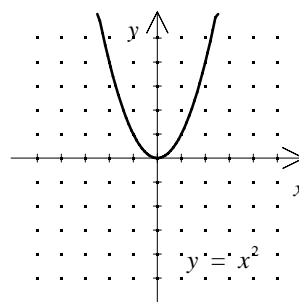
[A] up 2 units and to the right 1 unit
[B] down 1 unit and to the right 2 units
[C] down 1 unit and to the left 2 units
[D] up 1 unit and to the left 2 units
[E] up 2 units and to the left 1 unit

2. Use the graph of $y = x^2$ to find a formula for the function $y = f(x)$.



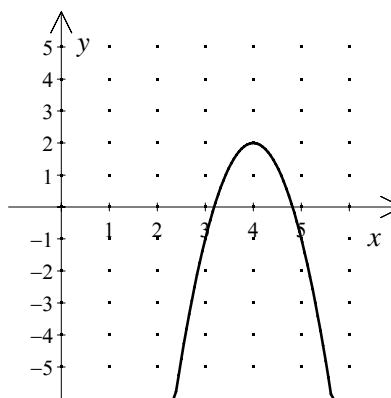
[A] $f(x) = (x-2)^2 + 3$
[B] $f(x) = (x+2)^2 - 3$
[C] $f(x) = (x-3)^2 + 2$
[D] $f(x) = (x-2)^2 - 3$

3. Use the graph of $y = x^2$ to find a formula for the function $y = f(x)$.



[A] $f(x) = (x+2)^2 + 1$
[B] $f(x) = (x+2)^2 - 1$
[C] $f(x) = (x+1)^2 - 2$
[D] $f(x) = (x-2)^2 + 1$

4. Which equation matches this parabola?



[A] $-3(x-4)^2 + 2$ [B] $-3(x-2)^2 + 4$
[C] $3(x+4)^2 + 2$ [D] $3(x-4)^2 + 2$

[1] C

[2] B

[3] D

[4] A