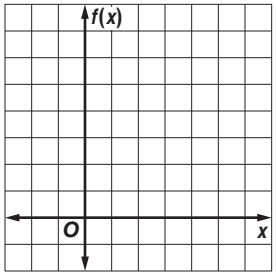
NAME _____ DATE _____ PERIOD _____

# 9-2 Practice

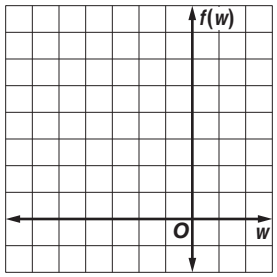
## *Solving Quadratic Equations by Graphing*

**Solve each equation by graphing.**

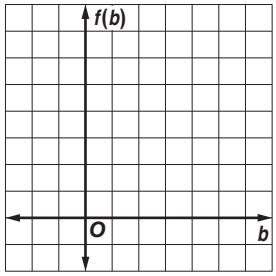
**1.** $x^2 - 5x + 6 = 0$




**2.** $w^2 + 6w + 9 = 0$

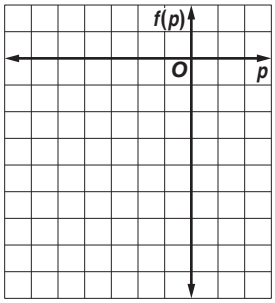



**3.** $b^2 - 3b + 4 = 0$

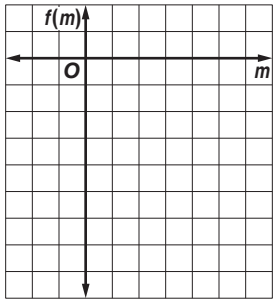



**Solve each equation by graphing. If integral roots cannot be found, estimate the roots to the nearest tenth.**

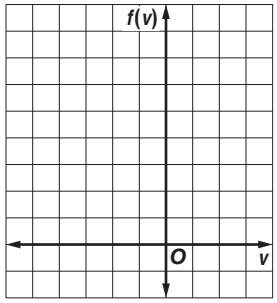
**4.** $p^2 + 4p = 3$



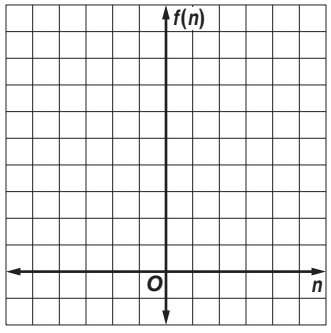

**5.** $2m^2 + 5 = 10m$




**6.** $2v^2 + 8v = -7$



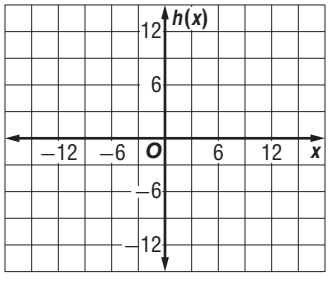

**7. NUMBER THEORY** Two numbers have a sum of 2 and a product of −8. The quadratic equation $-n^2 + 2n + 8 = 0$ can be used to determine the two numbers.




**a.** Graph the related function $f(n) = -n^2 + 2n + 8$ and determine its $x$-intercepts.

**b.** What are the two numbers?

**8. DESIGN** A footbridge is suspended from a parabolic support. The function $h(x) = -\frac{1}{25}x^2 + 9$ represents the height in feet of the support above the walkway, where $x = 0$ represents the midpoint of the bridge.




**a.** Graph the function and determine its $x$-intercepts.

**b.** What is the length of the walkway between the two supports?

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