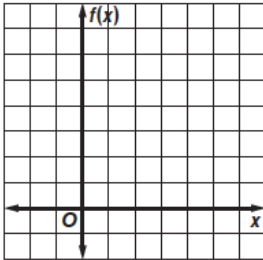


# Practice

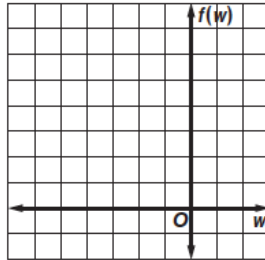
## Solving Quadratic Equations by Graphing

Solve each equation by graphing.

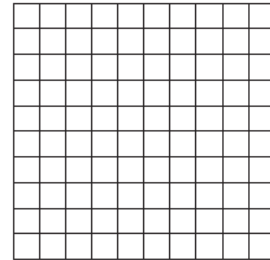
1.  $x^2 - 5x + 6 = 0$



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

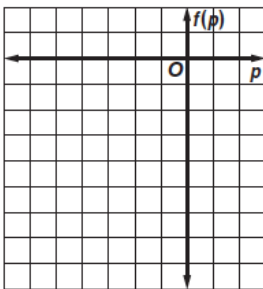


3.  $b^2 - 4b + 5 = 0$

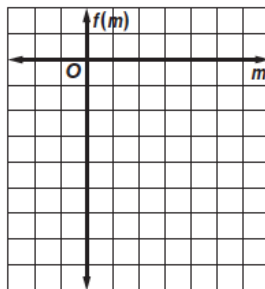


Solve each equation by graphing. If integral roots cannot be found, estimate the roots by stating the consecutive integers between which the roots lie.

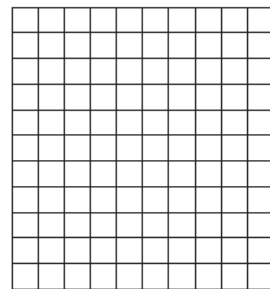
4.  $p^2 + 4p = 3$



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



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

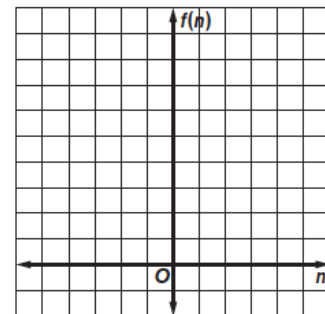


**NUMBER THEORY** For Exercises 7 and 8, use the following information.

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.

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

8. What are the two numbers?



**DESIGN** For Exercises 9 and 10, use the following information.

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.

9. Graph the function and determine its  $x$ -intercepts.

10. What is the length of the walkway between the two supports?

