Solve each equation by graphing. If integral roots cannot be found, estimate the roots by stating the consecutive integers between which the roots lie.
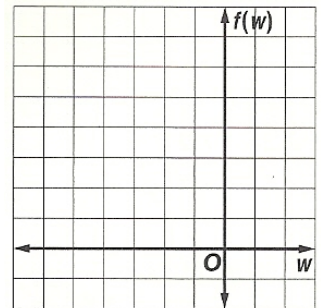
1. $w^2 + 6w + 9 = 0$

Axis of Symmetry: _____

Vertex: _____

Maximum or Minimum?
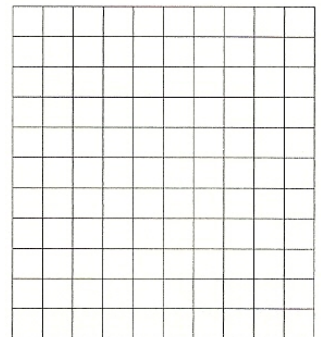
Solution(s):_____

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

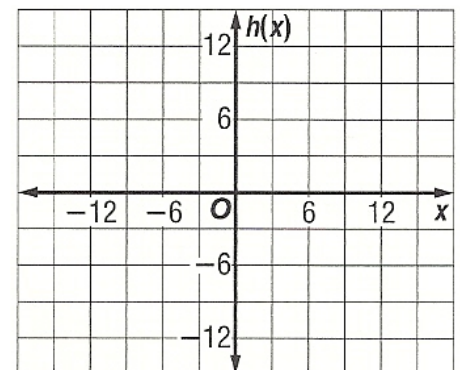Axis of Symmetry: _____

Vertex: _____

Maximum or Minimum?

Solution(s):_____

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.

3. Graph the function and determine its x-intercepts.

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

MENSA MIND TEASERS.
5. RUDE TAVERN is an anagram of what 10-letter word?

6. Tom beats Joe at pool but loses to Sue. Hilary usually wins against Joe, sometimes against Tom, but never against Sue. Who is the weakest player?