

Name:

Date:

Hour:

Algebra 1
Solve by Factoring Quadratics Practice WS

Solve each by factoring.

1. $3x^2 + x - 4 = 0$

2. $-2x^2 = -48$

3. $1 - 6x = 9x^2$

4. Robert threw a rock off a bridge into the river. The distance from the rock to the river is modeled by the equation $h = -16t^2 - 16t + 60$, where h is the height in feet and t is the time in seconds. How long will it take the rock to hit the water?
5. During a game of golf, Kayley hits her ball out of a sand trap. The height of the golf ball is modeled by the equation $h = -16t^2 + 20t - 4$, where h is the height in feet and t is the time in seconds since the ball was hit.
- How long does it take for the golf ball to hit the ground?
 - How high is the golf ball after 1.5 seconds?
6. An explosion causes debris to rise vertically with an initial speed of 72 feet per second. The equation $h = -16t^2 + 72t$ describes the height of the debris above the ground, h , in feet, t seconds after the explosion. How long is the debris in the air?

Solve each equation by taking square roots.

7) $2p^2 + 2 = 130$

8) $-6 - 8x^2 = -190$

9) $25x^2 - 6 = -5$

10) $7a^2 - 5 = 352$

11) $25n^2 + 2 = 38$

12) $10x^2 - 2 = 998$