

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?
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EXTRA PRACTICE:

Solve each equation by factoring. Find the roots. Find the zeros. Find the x-intercepts. (All of these directions mean the exact same thing.)

7) $9k^2 + 7 = 583$

8) $4r^2 + 6 = 42$

9) $10x^2 + 1 = 1001$

10) $9b^2 + 10 = 19$

11) $x^2 - 12x = -35$

12) $n^2 + 8n = -15$

13) $p^2 = 10p - 21$

14) $n^2 - 14 = -5n$

15) $5r^2 + 6 = 17r$

16) $5x^2 = -2 + 7x$
