

## WS Solving Quadratics by Factoring

**Solve each equation by factoring.**

1)  $(7n - 5)(7n - 6) = 0$

2)  $(m - 6)(m + 7) = 0$

3)  $(7k + 2)(k + 6) = 0$

4)  $a(3a - 7) = 0$

5)  $7x^2 - 5 = 34x$

6)  $3x^2 = -5 - 8x$

7)  $3a^2 = 8a$

8)  $3v^2 - v = 10$

9)  $k^2 = 7k - 10$

10)  $p^2 = 12 + 4p$

11)  $x^2 = 3x$

12)  $n^2 - 12n = -35$

13) A group of friends tries to keep a beanbag from touching the ground without using their hands. Once the beanbag has been kicked, its height can be modeled by  $h = -16t^2 + 14t + 2$ , where  $h$  is the height in feet above the ground and  $t$  is the time in seconds. Find the time it takes the beanbag to reach the ground.

14) The height of a flare can be approximated by the function  $h = -16t^2 + 95t + 6$ , where  $h$  is the height in feet and  $t$  is the time in seconds. Find the time it takes the flare to hit the ground.

15) The height of a fireworks rocket in meters can be approximated by  $h = -5t^2 + 30t$ , where  $h$  is the height in meters and  $t$  is the time in seconds. Find the time it takes the rocket to reach the ground after it has been launched.