Algebra 1

# Unit 3B Test Repair packet #2

Name_____

Date_____ Period_____

**Solve each equation by factoring.**

1) $x^2 - 9x + 20 = 0$

2) $a^2 - 5a - 14 = 0$

3) $m^2 + 7m + 6 = 0$

4) $v^2 - 3v - 28 = 0$

5) $x^2 + 4x - 9 = 3$

6) $n^2 - n - 16 = 4$

7) $r^2 - 12r + 38 = 3$

8) $k^2 - 2k - 12 = 3$

9) $49n^2 + 7n - 30 = 0$

10) $5x^2 - 46x + 48 = 0$

11) $5r^2 - 29r - 6 = 0$

12) $8b^2 + 19b + 6 = 0$

13) $7k^2 + 52k + 26 = 5$

14) $7k^2 - 53k - 27 = -3$

15) $7b^2 - 47b - 6 = 8$

16) $7v^2 - 58v + 14 = -2$

**Solve each equation with the quadratic formula.**

17) $3m^2 + 5m - 16 = 0$

18) $3x^2 - 5x - 112 = 0$

19) $6a^2 - 96 = 0$

20) $x^2 + 7x - 24 = 0$

21) $2x^2 - 4x - 124 = 2$

22) $n^2 + 4n - 26 = -2$

23) $8n^2 - 10n = 4$

24) $3x^2 + 4x - 13 = 7$

25) $2n^2 - n - 55 = 0$

26) $3x^2 - 108 = 0$

27) $2k^2 + 5k - 99 = -11$

28) $2x^2 + 9x - 7 = -11$

**Solve by using the quadratic formula after getting the equation into standard form**

29) $2(x - 5)^2 - 4 = 12$

30) $3(x + 2)^2 + 1 = 103$

31) $-5(x - 7)^2 - 2 = -52$

32) $3(x + 4)^2 - 3 = 33$

**A ball was thrown from the roof of a building and it was modeled by the following equation** $h(t) = -16t^2 + 48t + 14$, **where** $h$ **is height in feet and** $t$ **is time in seconds**

33) How high the roof the ball is thrown from?

34) How high is the ball after 3 seconds?

35) How long will it take for the ball to hit the ground?