

**Algebra 2****CW: Solving Quadratic Equations by Factoring**

Name \_\_\_\_\_

Date \_\_\_\_\_ Block \_\_\_\_\_

Solve each equation by factoring.

1.  $x^2 - 4x - 12 = 0$

2.  $x^2 - 16x + 64 = 0$

3.  $x^2 - 20x + 100 = 0$

4.  $x^2 - 6x + 8 = 0$

5.  $x^2 + 3x + 2 = 0$

6.  $x^2 - 9x + 14 = 0$

7.  $x^2 - 4x = 0$

8.  $7x^2 = 4x$

9.  $x^2 + 25 = 10x$

10.  $10x^2 = 9x$

11.  $x^2 = 2x + 99$

12.  $x^2 + 12x = -36$

13.  $5x^2 - 35x + 60 = 0$

14.  $36x^2 = 25$

15.  $2x^2 - 8x - 90 = 0$

16.  $3x^2 + 2x - 1 = 0$

17.  $6x^2 = 9x$

18.  $3x^2 + 24x + 45 = 0$

19.  $15x^2 + 19x + 6 = 0$

20.  $3x^2 - 8x = -4$

21.  $6x^2 = 5x + 6$

Write a quadratic equation with the given roots. Write the equation in the form  $ax^2 + bx + c = 0$ , where  $a$ ,  $b$ , and  $c$  are integers.

22. 7, 2

23. 0, 3

24. -5, 8

25. -7, -8

26. -6, -3

27. 3, -4

28. 1,  $\frac{1}{2}$

29.  $\frac{1}{3}$ , 2

30. 0,  $-\frac{7}{2}$

31.  $\frac{1}{3}$ , -3

32. 4,  $\frac{1}{3}$

33.  $-\frac{2}{3}$ ,  $-\frac{4}{5}$