

**Selected Problems from Section 1.3 (Quadratic Equations)**

MTH 103E worksheet

Name \_\_\_\_\_

In problems #1-6, solve each equation by factoring.

1.  $x^2 - x - 6 = 0$

2.  $x^2 + 8x + 15 = 0$

3.  $x^2 - 144 = 0$

4.  $x^2 + 4x = 0$

5.  $5x^2 - 13x + 6 = 0$

6.  $2x^2 + 5x - 12 = 0$

In problems #7-12, solve each equation using the Square Root Property.

7.  $x^2 - 75 = 0$

8.  $5x^2 = 400$

9.  $16x^2 = 11$

10.  $2x^2 - 13 = 0$

11.  $(y+2)^2 - 98 = 0$

12.  $(5y+2)^2 - 48 = 0$

In problems #13-16, solve each equation using the Quadratic Formula.

13.  $6x^2 + x - 2 = 0$

14.  $2x^2 = 5x + 11$

15.  $13x^2 + 1 = -10x$

16.  $2x(x+3) = -1$

In problems #17-22, complete the square to make a perfect square trinomial.

17.  $x^2 + 8x$

18.  $x^2 - 12x$

19.  $t^2 + 9t$

20.  $s^2 - 7s$

21.  $p^2 + \frac{3}{2}p$

22.  $m^2 - \frac{2}{3}m$

In problems #23-30, solve each equation by completing the square.

23.  $x^2 + 10x + 21 = 0$

24.  $x^2 - 6x = -1$

25.  $x^2 + 12x = -8$

26.  $x^2 + 1 = -4x$