

**MTH 099 FALL 2001**

**REVIEW EXERCISES FOR TEST 2**

**NAME:**

1. Factor each of the following.

(a)  $x^3 - 8$

(b)  $x^3 + 27$

(c)  $9x^3 + 18x^2 - 4x - 8$

(d)  $16x^2 - 25y^2$

(e)  $9x^2 - 12x + 4$

2. Solve each of the following equations.

(a)  $-5x + 4 = -6$

(b)  $7 - 3x = 8x - 4$

(c)  $x^2 - 5x + 6 = 0$

(d)  $9x^3 + 18x^2 - 4x - 8 = 0$

(e)  $4x^3 - 16x = 0$

**3.** Solve each of the following formula for the indicated variable.

(a)  $A = m + mrt$ , for  $m$

(b)  $3z - 4y = 2$ , for  $z$

4. Solve the following linear inequalities, then graph the solutions.

(a)  $2x + 5 \leq 3x - 2$

(b)  $5 < 2x - 3 < 9$

5. The length of a rectangle is 4 meters less than twice its width. The perimeter of the rectangle is 40 meters. Find the dimensions of the rectangle.