Red Belt Warm-Up
Wednesday November 30, 2005

1. Solve the following algebraic equations.

   a. $4x - 6 = 14$

   b. $15x - 8 = 4 + 9x$

   c. $2x - 7(x - 2) = 26$

   d. $5(x + 2) - 3(x - 1) = 12$

   e. $\frac{2}{x} = 3$

   f. $\frac{1}{x} + \frac{2}{x} = 12$

2. A bridge is divided into three sections. The last section is 130 m longer than the first, the middle section is 3 times as long as the last. If the bridge is 1 km long, find the length of each section. (Write an algebraic equation for this problem, then solve.)

3. Solve the following pairs of equations for x and y.

$$\begin{aligned} 2x + y &= 4 \\ 3x - y &= 11 \end{aligned} \qquad\qquad \begin{aligned} 2x + 3y &= 3 \\ 3x - y &= 10 \end{aligned}$$