Quiz 4, 3 October 2008

1. Find all real solutions to

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

Subtract 15 from both sides to obtain $x^2 + 2x - 15 = 0$. Factor, obtain $(x + 5)(x - 3) = 0$. Solutions are $x = -5$ or 3.

Objective: Review the solution of quadratic equations.

2. Solve the system

$$\begin{aligned} 2x + 3y &= 4 \\ 3x - 2y &= -7 \end{aligned}$$

The solution is $(x, y) = (-1, 2)$.

Objective: Practice elimination or substitution. Did you check your answer?

3. Write down a system of two linear equations in two unknowns which has more than seven solutions.

Many answers are possible. One is $x = 1$ and $2x = 2$.

Objective: Reinforce conceptual understanding. A system of linear equations may have 0, 1 or infinitely many solutions.

Grading: A score of 1 earns the daily attendance point.