Sample Test 1 - Math 1314, Each problem is worth 7 points.

1. Solve the following decimal problem
   
   \[ 0.3(2n - 5) = 11 - 0.65n \]

2. Judy bought a coat at a 20% discount sale for $72. What was the original price of the coat?

3. Find the discount sale price of a $82 item that is on sale for 35% off.

4. Solve the following rational equation
   
   \[ \frac{x}{x - 2} + 1 = \frac{8}{x - 1} \]

5. Solve the following rational equation
   
   \[ \frac{x}{4x - 4} + \frac{5}{x^2 - 1} = \frac{1}{4} \]

6. Solve the following quadratic equation by factoring.
   
   \[ 3x^2 - 18x = 0 \]

7. Solve the following quadratic equation by the square root property.
   
   \[ 4x^2 = 49 \]

8. Solve the following quadratic equation by the square root property.
   
   \[ (2x + 1)^2 = 25 \]

9. Solve the following quadratic equation by completing the square.
   
   \[ x^2 - 8x - 1 = 0 \]

10. Solve the following quadratic equation by completing the square.
    
    \[ 2x^2 - 3x + 5 = 0 \]

11. Solve the following quadratic equation by the quadratic formula and get decimal answers.
    
    \[ 5.2x^2 - 6.3x - 9.4 = 0 \]

12. Solve the following quadratic equation by the quadratic formula and get decimal answers.
    
    \[ 4x^2 + 5x - 11 = 0 \]

13. Solve the following radical equation
    
    \[ \sqrt{x} + 6 = x \]

14. Solve the following radical equation
    
    \[ \sqrt{x - 3} = x - 3 \]