Math 100: Chapter 2 Review

1. Simplify each algebraic expression as much as possible.
   (a) \(-2(3x - 4) + 7x - 6\)
   (b) \((3x^2 + 7x) - (4x^2 - 5x)\)

2. Solve each equation:
   (a) \(4x - 2(x - 2) = 32\)
   (b) \(\frac{2(x - 1)}{3} = \frac{2(x + 3)}{3}\)

3. Solve the inequality  \(0.2x + 1.3 < 0.4x - 2.1\)

4. Twice the sum of a number and seven is the sum of five times the number and six. Write an equation and find the number.

5. From the equation \(A = D + BC\), solve for \(B\).

6. Simplify the expression \(x^2 - 5x + 2\) when \(x = -3\).

7. How many liters of a 50% chlorine solution should be mixed with 8 liters of a 25% solution to obtain a 40% solution?

8. The sum of three consecutive odd numbers is 39. Write an equation and solve to find the three numbers.