1. Evaluate the following expressions:

   (a) \((2)(-6) - 3(4 - 5 \cdot 3)\)

   (b) \(3 \cdot 7 - 2 \cdot 3^2 - 5\)

   (c) \((5 - 3)^3 (4 - 7)\)

   (d) \(\frac{8 + 4 \cdot 5}{2 \cdot 7}\)

2. Simplify the following expressions:

   (a) \(x + 5y - 3x - 2y\)

   (b) \(5(3y - 2) - (7y + 2)\)

   (c) \(7(x + 2y) - 2(3x - 5y)\)
3. Solve the following equations:

(a) \(4x + 3 = 5\)  
(b) \(\frac{2x}{3} = 4\)

(c) \(3(x + 2) = 9\)  
(d) \(\frac{x}{4} - 2 = 5\)

(e) \(3(x + 4) - 5(x + 1) = 3\)  
(f) \(x + 1 = 4x\)

4. Solve for \(y\) in the following equation:

\[6x + 2y = 4\]
5. Josh has a bag of apples. He eats half of the apples, and then he buys 8 more apples. Afterwards, there are 12 apples in the bag.

(a) Let \( x \) be the initial number of apples in the bag. Write an equation that you could use to solve for the initial number of apples.

(b) Solve the equation.

6. Becky is five years older than Jimmy. The sum of their ages is 19.

(a) Let \( x \) be Jimmy’s age. Write an equation to determine Jimmy’s age.

(b) Solve the equation. How old are Becky and Jimmy?
7. A middle school has 196 students in grades 6th, 7th, and 8th. There are twice as many 7th graders as 6th graders, and there are 20 more 8th graders than 6th graders. How many students are there in 6th, 7th, and 8th grade?

8. Susan pays $16.20 for a shirt, including 8% sales tax. What was the price of the shirt before sales tax?