

Simplify each expression

$$\boxed{1} \quad 5x + 4 - 6x - 10$$

$$\boxed{2} \quad \frac{3x}{5} + 4 - \frac{1}{2}x$$

$$\boxed{3} \quad 72 + 4(5 - 3x) - (x + 3) - (4 - x) - 2(3 - 5x)$$

Solve each equation, show all your steps.

$$\boxed{4} \quad \frac{3}{5}x - 2 = 7$$

$$\boxed{5} \quad \frac{3x - 4}{5} = \frac{2x - 5}{2}$$

$$\boxed{6} \quad 3x - 5(2 - x) = 4 + 6(3 - 4x)$$

$$\boxed{7} \quad \frac{1}{2}x + \frac{1}{3} = \frac{1}{4}$$

- 8 Brady, Cadence, Dale, and Eleanor are having a Tic-Tac Toe tragedy. It turns out that no one is winning any games against anyone else. Brady has played 9 more games than Dale. Cadence has played 6 more games than Dale. Eleanor has played one more than half as many as Brady. If in total they have played 52 games of tic-tac-toe, then how many games has each person played?
- a Let  $x$  represent \_\_\_
- b Write and solve an equation using only  $x$  to represent the information in the problem
- c Answer the question
- 9 The length of a rectangle is 4 times as much as the width. If the perimeter is 44, then what is the area? *Write and solve an equation to find the solution, answer the question.*
- 10 Mr. Hershman spends  $\frac{5}{8}$  of his shopping money on a new carabiner for rock climbing. He spends another  $\frac{1}{4}$  of it on a 4 ft runner. Finally he has \$1 left. How much shopping money did he have to begin with? *Write and solve an equation to find the solution, answer the question.*