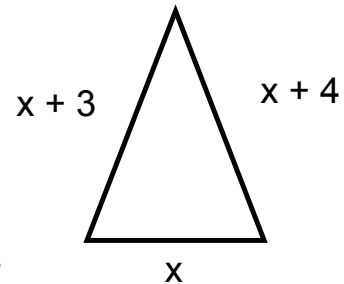
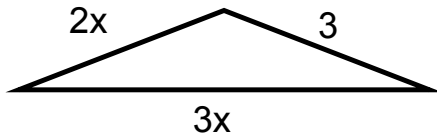


Date: _____



4.2 Solving Multi-Step Equations

The triangles shown below have the same perimeter. Diagrams are not drawn to scale!



- Create an equation for each triangle's perimeter.
- Combine these equations to show that the perimeter of each triangle is the same.
- Solve your equation to find the value of x . Show your work algebraically, and explain your thinking in words.
- What skills did we need to combine to do this problem? How did we have to extend our knowledge of solving equations?

To solve multi-step equations:

- Expand each side to eliminate brackets (multiplication).
- Simplify by collecting like terms on each side.
- Move your variable terms to one side of the equals sign and your constant terms to the other side using opposite operation/the balance approach.
- Isolate the variable by dividing both sides by its coefficient.

All of these steps will not be necessary every time!

Practice Problems:

1) Solve each of the following equations. Check your solution.

a) $5x - 3(x + 1) = -3x + 2$

b) $2(x - 5) + 3 = -3(x + 2)$

2) Determine the measure of x in the triangle shown below.

