**Inequalities Involving Addition and Subtraction**

Solve each inequality:

1. x + 5 < -12 2. 8 ≤ y – 3

-5 -5 🡨 USED INVERSE OPERATION 🡪 +3 + 3

x + 0 < -17 🡪 x < -17 11 ≤ y + 0 🡪 11 ≤ y

Scenario:

The vet says that Shiloh’s puppy will **grow** to be **at most 28 inches** tall. Shiloh’s puppy is currently **1 foot** tall. How many more inches will the puppy grow?

Step(1): Write the inequality

\*\*Conversion: 1 foot = 12 inches

Let “x” represent the additional number of inches the puppy could grow

12 + x ≤ 28

Step(2): Solve the inequality

12 + x ≤ 28

-12 -12

0 + x ≤ 16 🡪 x ≤ 16

The puppy could grow **at most** 16 inches taller.