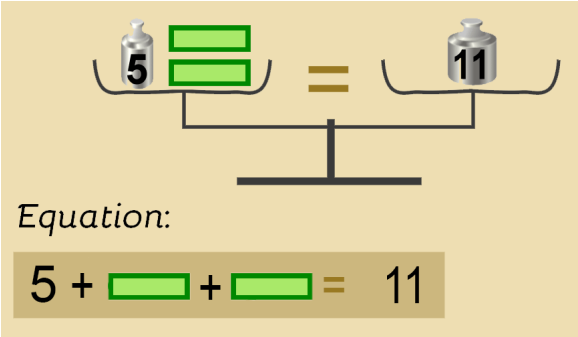
Balance Problems and Equations 1

Here you see a pan balance, or scales, and some things on both pans. Each rectangle represents an unknown (and "weighs" the same, or has the same value).

Since the balance is *balanced* (neither pan is going down—they are level with each other), the two sides (pans) of the scales weigh the same.



This portrays a mathematical equation: what is in the left pan *equals* what is in the right pan. (Things in the same pan are simply added.)

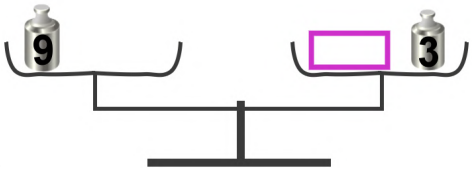
The equation is:

5 + ▭ + ▭ = 11

(If it helps you, you can think of kilograms or pounds.)

When we figure out how much the unknown shape weighs, we solve the equation.
The solution is: ▭ = 3

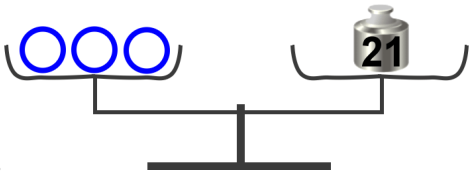
1. Write an equation for each balance. Then use mental math to solve how much each geometric shape "weighs." You can write a number inside each of the geometric shapes to help you.



a.

Equation: $9 = \square + 3$

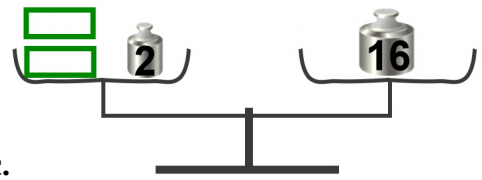
Solution: $\square = 6$



b.

Equation: _____

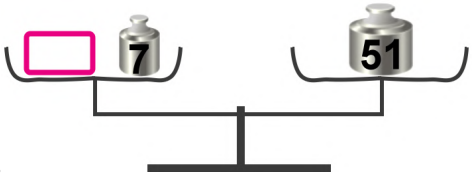
Solution: ○ = _____



c.

Equation: _____

Solution: ▭ = _____



d.

Equation: _____

Solution: ▭ = _____