

**Master 31a**

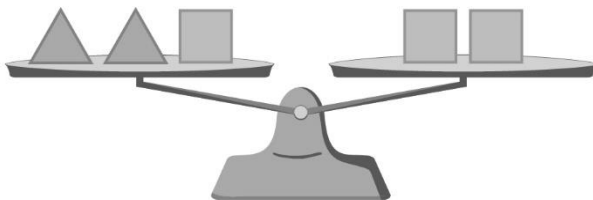
**Connections: Balance Puzzles**

Do you like to do puzzles?

Have you ever tried a balance puzzle?

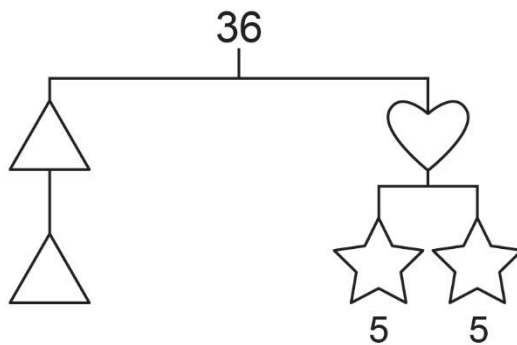
When things are balanced, the quantities on both sides are equal.

What do you know about the shapes on this pan balance?



A triangle has a mass equal to one-half the mass of a square.

What do you know about the shapes on this balance mobile?



The whole mobile represents 36.

What does each side represent?

Find what each shape represents, given that a star is 5.

Master 31b

**Connections: Balance Puzzles**

Solve this puzzle.

$$\text{Soccer Ball} + \text{Soccer Ball} + \text{Soccer Ball} = 15$$

$$\text{Soccer Ball} + \text{Basketball} + \text{Basketball} = 21$$

$$\text{Basketball} + \text{Football} = 20$$

$$\text{Soccer Ball} + \text{Basketball} + \text{Football} = ?$$

Try making a balance puzzle of your own.  
Then trade puzzles with a classmate and solve each other's puzzles.