

How do we set up a **proportion problem**? Here's one.

Maria filled 4 jars with jam using 3 pounds of strawberries.

What proportion can be used to find out how many jars she can fill with 9 pounds of strawberries?

Make a fraction and either label each number with a word or a variable.

$$\frac{4j}{3s}$$

We can read this as “for every 4 jars, there are 3 pounds of strawberries.” Keep an eye on the units. Some problems jump between seconds and minutes or inches and feet. This one consistently uses pounds.

Pay attention to the variable. We set up the fraction so that the jars “live on top” and the strawberries “live on bottom.” In the second fraction, use x to represent “how many” jars on top and put the 9 with the strawberries on bottom.

$$\frac{4j}{3s} = \frac{xj}{9s}$$

Rainbow rainbow, times 3 on top and bottom, gives 12 jars.

We can also set it up so that the jars “live on the left” and the strawberries “live on the right.” This time we have to keep the 4j and 3s together on the top or bottom.

$$\frac{4j}{xj} = \frac{3s}{9s}$$

In fact, the only mistake you can make with setting up a proportion is to set up numbers that go together so that they are diagonal to each other.