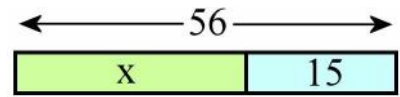


Bar Models in Addition and Subtraction

Think of this **bar model** as a long board, cut into two pieces. It is 56 units long in total, and the two parts are 15 and x units long.



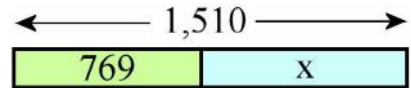
From the bar model, we can write TWO addition and TWO subtraction sentences—a **fact family**.

$$x + 15 = 56 \quad 56 - x = 15$$

The x stands for a number, too. We just don't know what it is yet. It is an **unknown**.

$$15 + x = 56 \quad 56 - 15 = x$$

From this bar model, we can write a **missing addend** problem. It means that a number to be added is “missing” or unknown:



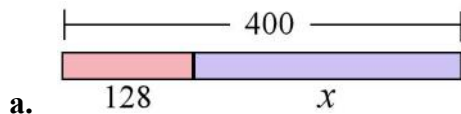
$$769 + x = 1,510$$

$$769 + x = 1,510$$

We can solve it by subtracting the one part (769) from the total (1,510).

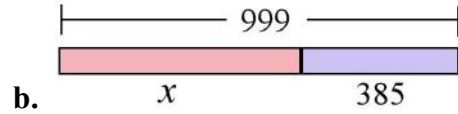
$$x = 1,510 - 769 = 741$$

1. Write a missing addend problem that matches the bar model. Then solve it by subtracting.



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



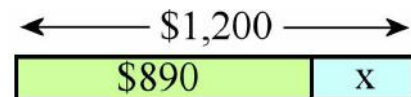
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

c. A car costs \$1,200. Dad has \$890.
How much more does he need to buy it?

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



d. The school has 547 students, of which 265 are girls. How many are boys?

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

