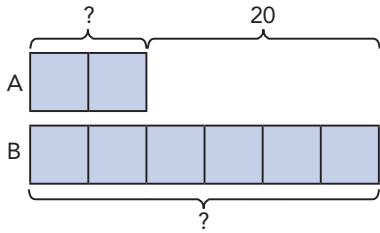


Interpret a Comparison Bar Model

Example 1 Given the difference

Find the value of A and B.



STEP 1 The difference between the two bars, 20, is equal to 4 units of a bar. Divide to find the value of a single unit of the bars.

$$4 \text{ units} \rightarrow 20$$

$$1 \text{ unit} \rightarrow \frac{20}{4} = 5$$

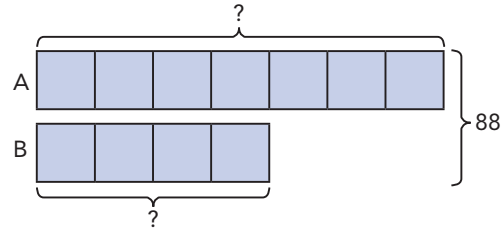
STEP 2 Count the number of units in each bar. Multiply each number of units by 5.

$$\text{Value of A: } 2 \text{ units} \rightarrow 2 \times 5 = 10$$

$$\text{Value of B: } 6 \text{ units} \rightarrow 6 \times 5 = 30$$

Example 2 Given the sum

Find the value of A and B.



STEP 1 The sum of the two bars, 88, is equal to 11 units of the bars. Divide to find the value of a single unit of the bars.

$$11 \text{ units} \rightarrow 88$$

$$1 \text{ unit} \rightarrow \frac{88}{11} = 8$$

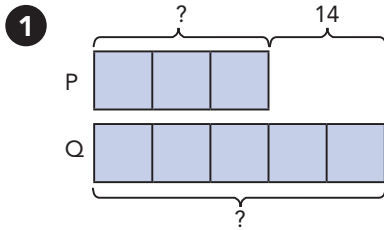
STEP 2 Count the number of units in each bar. Multiply each number of units by 8.

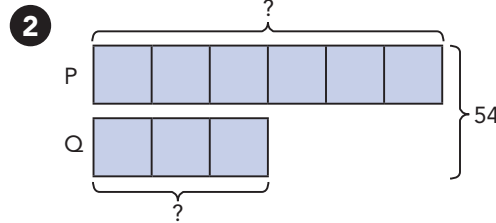
$$\text{Value of A: } 7 \text{ units} \rightarrow 7 \times 8 = 56$$

$$\text{Value of B: } 4 \text{ units} \rightarrow 4 \times 8 = 32$$

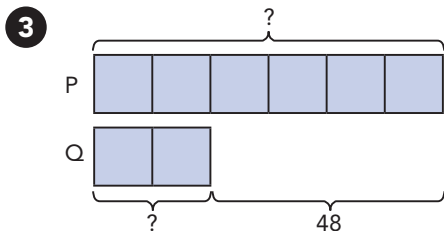
Quick Check

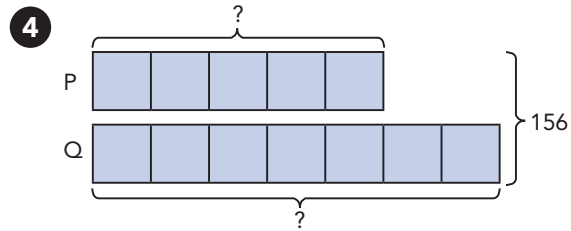
Find the values of P and Q.





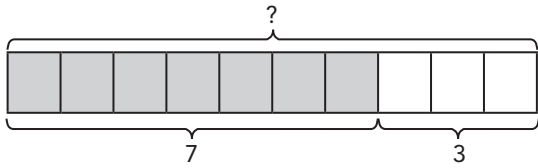
Practice on Your Own
Find the values of P and Q.





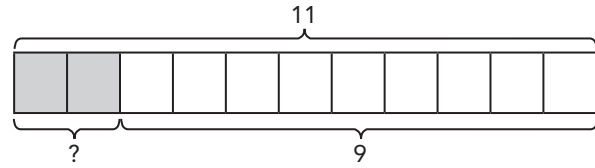
Use Bar Models to Show the Four Operations

Example 1 Addition



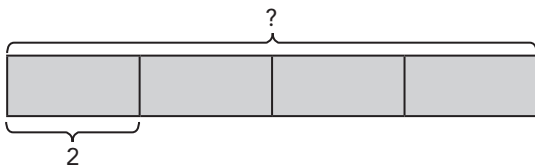
$$\begin{aligned} ? &= 7 + 3 \\ &= 10 \end{aligned}$$

Example 2 Subtraction



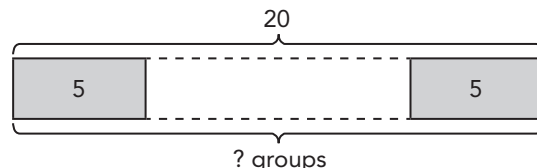
$$\begin{aligned} ? &= 11 - 9 \\ &= 2 \end{aligned}$$

Example 3 Multiplication



$$\begin{aligned} ? &= 4 \times 2 \\ &= 8 \end{aligned}$$

Example 4 Division



$$\begin{aligned} ? &= 20 \div 5 \\ &= 4 \end{aligned}$$

✓ Quick Check

Draw a bar model to show each operation.

1 $15 - 4$

2 $13 + 4$

3 $30 \div 6$

4 7×4

Practice on Your Own

Draw a bar model to show each operation. Write the result of each operation.

5 $33 \div 3$

5 $11 + 7$

7 5×7

8 $19 - 9$
