

Fraction - Transferring, Unchanged Total

Classic Example

Cindy had $\frac{1}{5}$ of the stickers Diane had.

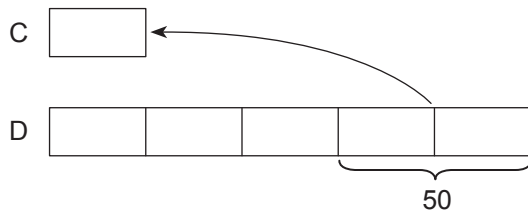
After Cindy received 50 stickers from Diane, both of them had the same number of stickers.

How many stickers did they have altogether?

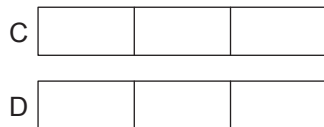
Solution

One way to solve this problem is to draw the 'At first' and 'Later' models.

At first,



Later,



2 u → 50 stickers

1 u → 25 stickers

6 u → $25 \times 6 = 150$ stickers

Ans: 150 stickers

Practice

- 1 Shawn had $\frac{5}{9}$ the number of books Ted had.

After Shawn received 20 books from Ted, they each had the same number of books.

How many books did they have altogether?

Ans: _____ books

- 2 Alan had $\frac{3}{7}$ the number of marbles Ben had.

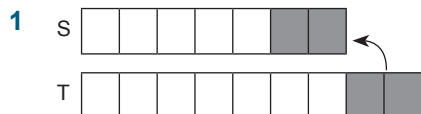
After Alan received 30 marbles from Ben, they each had the same number of marbles.

How many marbles did they have altogether?

Ans: _____ marbles

Solutions:

Fraction - Transferring, Unchanged Total



$$5 + 9 = 14$$

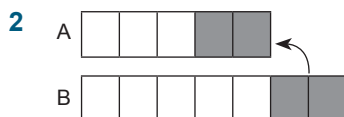
$$14 \div 2 = 7 \text{ u each}$$

$$2 \text{ u} \rightarrow 20 \text{ books}$$

$$1 \text{ u} \rightarrow 10 \text{ books}$$

$$14 \text{ u} \rightarrow 140 \text{ books}$$

Ans: 140 books



$$3 + 7 = 10$$

$$10 \div 2 = 5 \text{ u each}$$

$$2 \text{ u} \rightarrow 30 \text{ marbles}$$

$$1 \text{ u} \rightarrow 15 \text{ marbles}$$

$$10 \text{ u} \rightarrow 150 \text{ marbles}$$

Ans: 150 marbles