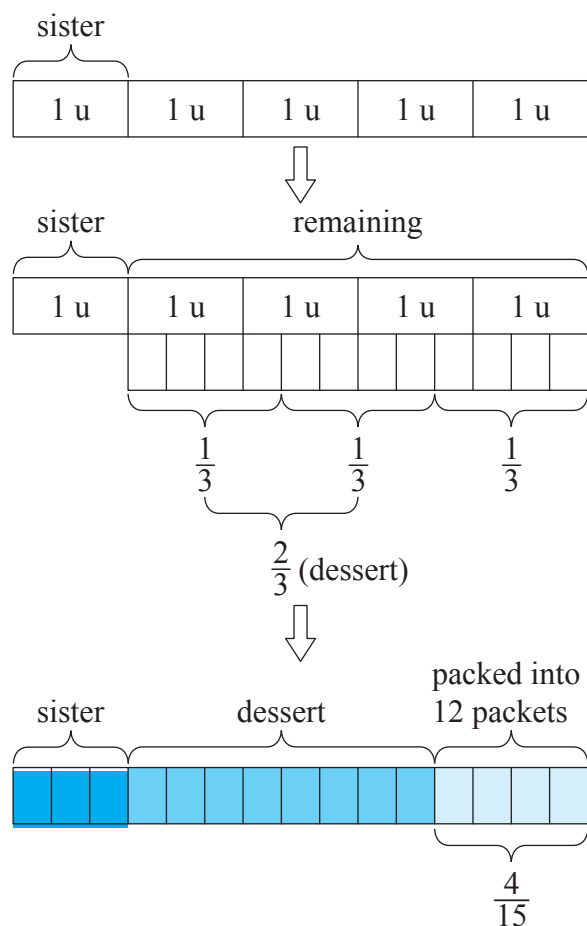


Fractions

EXAMPLE

May gave $\frac{1}{5}$ of a pack of sugar to her sister. She then used $\frac{2}{3}$ of the remaining sugar to prepare some dessert and packed the sugar left into 12 equal packets. What was the fraction of sugar in 1 packet?

Solution:



Since we know that $\frac{4}{15}$ of the sugar is divided into 12 equal packets, we can find the fraction of sugar in 1 packet:

$$\frac{4}{15} \div 12 = \frac{4}{15} \div \frac{12}{1} = \frac{4}{15} \times \frac{1}{12} = \frac{1}{45}$$

The fraction of sugar in 1 packet was $\frac{1}{45}$.

Adapted:

Conquer Model Drawing for Upper Primary Levels

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STRICTLY NOT FOR SALE.

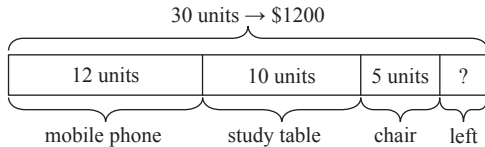
Look for other useful resources: www.sagprp.com

- 3 There were blue, yellow and red balls in a container. $\frac{2}{3}$ of the balls were blue, $\frac{1}{4}$ of them were yellow and the rest were red. Joshua took out $\frac{1}{4}$ of the blue balls, $\frac{1}{3}$ of the yellow balls and $\frac{1}{2}$ of the red balls from the container. What fraction of the balls were left in the container?

Solutions to:

Fractions

1. mobile phone $\rightarrow \frac{2}{5} = \frac{12}{30}$
 study table $\rightarrow \frac{1}{3} = \frac{10}{30}$
 chair $\rightarrow \frac{1}{6} = \frac{5}{30}$



Since there are 30 units in all, we can find the number of units representing the amount of money left:

$$30 \text{ units} - 12 \text{ units} - 10 \text{ units} - 5 \text{ units} = 3 \text{ units}$$

Since 30 units represent \$1200, we can find the amount of money represented by 1 unit:

$$30 \text{ units} \rightarrow \$1200$$

$$1 \text{ unit} \rightarrow ?$$

$$\$1200 \div 30 = \$40$$

Since 1 unit represents \$40, we can find the amount of money left:

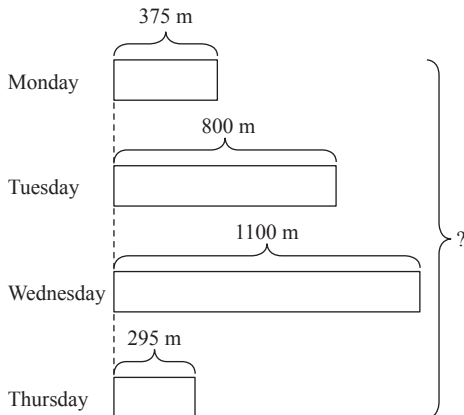
$$1 \text{ unit} \rightarrow \$40$$

$$3 \text{ units} \rightarrow ?$$

$$\$40 \times 3 = \$120$$

She had **\$120** left.

2. Mon $\rightarrow \frac{3}{8} \text{ km} = \frac{3}{8} \times 1000 \text{ m} = 375 \text{ m}$
 Tue $\rightarrow 800 \text{ m}$
 Wed $\rightarrow 1.1 \text{ km} = 1.1 \times 1000 \text{ m} = 1100 \text{ m}$
 Mon + Wed $\rightarrow 375 \text{ m} + 1100 \text{ m} = 1475 \text{ m}$
 Thu $\rightarrow \frac{1}{5} \times 1475 \text{ m} = 295 \text{ m}$



Now, we can find the total distance Mr Liu jogged from Monday to Thursday:

$$375 \text{ m} + 800 \text{ m} + 1100 \text{ m} + 295 \text{ m} = 2570 \text{ m}$$

Mr Liu jogged **2570 m** from Monday to Thursday.

3. Blue balls in the container $\rightarrow \frac{2}{3} = \frac{8}{12}$

$$\text{Yellow balls in the container} \rightarrow \frac{1}{4} = \frac{3}{12}$$

$$\begin{aligned} \text{Red balls in the container} &\rightarrow 1 - \frac{2}{3} - \frac{1}{4} \\ &= \frac{12}{12} - \frac{8}{12} - \frac{3}{12} \\ &= \frac{1}{12} \end{aligned}$$

$$\begin{aligned} \text{Took out } \frac{1}{4} \text{ of the blue balls} &\rightarrow \frac{1}{4} \times \frac{8}{12} \\ &= \frac{2}{12} \\ &= \frac{1}{6} \end{aligned}$$

$$\text{Took out } \frac{1}{3} \text{ of the yellow balls} \rightarrow \frac{1}{3} \times \frac{3}{12} = \frac{1}{12}$$

$$\text{Took out } \frac{1}{2} \text{ of the red balls} \rightarrow \frac{1}{2} \times \frac{1}{12} = \frac{1}{24}$$

Total fraction of the balls taken out

$$\begin{aligned} &\rightarrow \frac{1}{6} + \frac{1}{12} + \frac{1}{24} \\ &= \frac{4}{24} + \frac{2}{24} + \frac{1}{24} \\ &= \frac{7}{24} \end{aligned}$$

Fraction of the balls left in the container

$$\begin{aligned} &\rightarrow 1 - \frac{7}{24} \\ &= \frac{24}{24} - \frac{7}{24} \\ &= \frac{17}{24} \end{aligned}$$

$\frac{17}{24}$ of the balls were left in the container.