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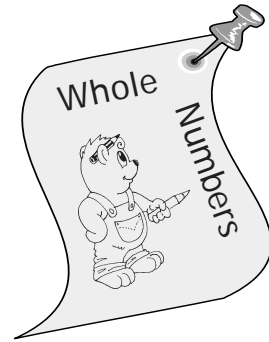
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*More challenging problems specially for advanced pupils.

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Unit

Use Before-After Concept (2)

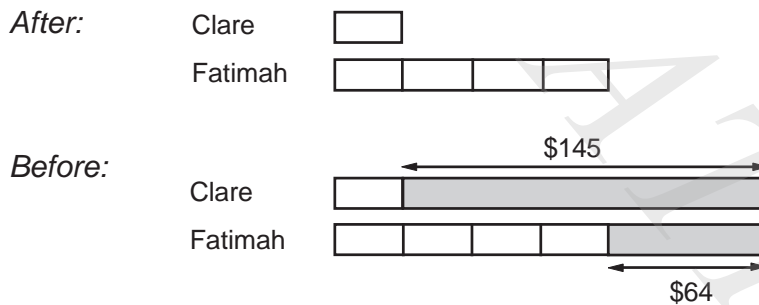


Example

Clare and Fatimah had an equal amount of money.
 Clare spent \$145 and Fatimah spent \$64.
 After that, Fatimah had 4 times as much money left as Clare.
 How much did each of them have at first?

Solution:

Draw a model to show the given information.



From the model,

$$3 \text{ units --- } \$145 - \$64 = \$81$$

$$1 \text{ unit --- } \$81 \div 3 = \$27$$

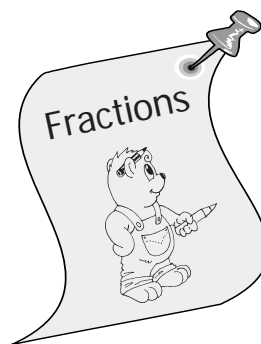
$$\$27 + \$145 = \$172$$

Ans: \$172

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Unit

Restate The Problem



Example

A full tin of paint has a mass of 27 kg.

When the same tin is $\frac{2}{5}$ filled with paint, it has a mass of 12 kg.

What is the mass of the empty tin?

Solution:

Restate the problem in another way.

(\square = Mass of the empty tin; \bigcirc = Mass of $\frac{1}{5}$ tin of paint)

Since $\square + \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc = 27$ and $\square + \bigcirc \bigcirc = 12$

$$\bigcirc \bigcirc \bigcirc = 27 - 12 = 15$$

$$\bigcirc = 15 \div 3 = 5$$

$$\square = 12 - 2 \times 5 = 2$$

Ans: 2 kg

Practice 15

1. A jug had a mass of 600 g when it was $\frac{2}{3}$ filled with water.

The same jug had a mass of 750 g when it was full of water.

What was the mass of the empty jug?

2. A box fully filled with green beans has a mass of 80 kg.

When it is $\frac{3}{8}$ filled with green beans, it has a mass of 35 kg.

What is the mass of the empty box?