

Finding fractions of amounts

The **denominator** tells us how many parts to divide into.

Finding $\frac{1}{5}$ of an amount is the same as dividing that amount by 5.

So $\frac{1}{5}$ of 30 = 6

$$30 \div 5 = 6$$



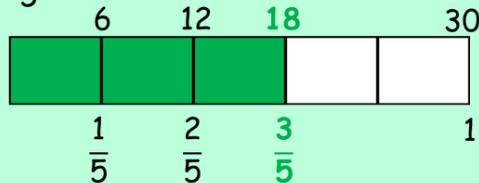
The **numerator** tells us how many parts we want.

If we're asked to find $\frac{3}{5}$ of an amount, we need 3 parts.

If $\frac{1}{5}$ of 30 = 6

Then $\frac{3}{5}$ of 30 = 18

$$6 \times 3 = 18$$

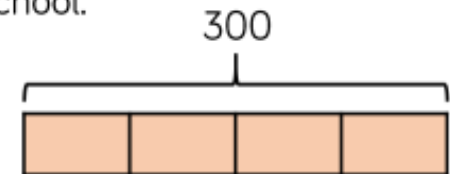


A

- ❑ A cook has 48 kg of potatoes. He uses $\frac{5}{8}$ of the potatoes. How many kilograms of the potatoes does he have left?
Use the bar model to find the answer to this question.



- ❑ A football team has 300 tickets to give away. They give $\frac{3}{4}$ of them to a local school. How many tickets are left?

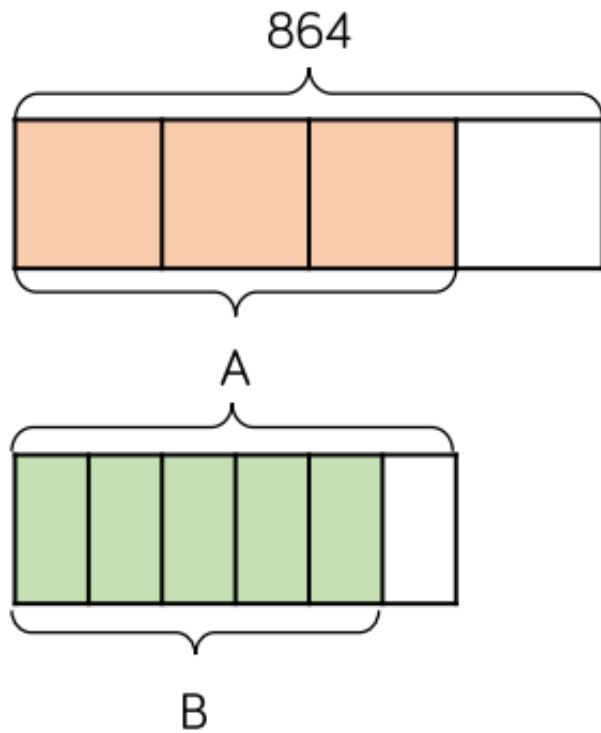


B

- ❑ Calculate:
- | | | | |
|-----------------------|--------------------------|-------------------------|-------------------------|
| $\frac{1}{5}$ of 30 = | $\frac{1}{5}$ of 60 = | $\frac{1}{5}$ of 120 = | $\frac{1}{5}$ of 240 = |
| $\frac{2}{5}$ of 30 = | $\frac{1}{5}$ of 600 = | $\frac{1}{10}$ of 120 = | $\frac{6}{5}$ of 240 = |
| $\frac{4}{5}$ of 30 = | $\frac{1}{5}$ of 6,000 = | $\frac{1}{20}$ of 120 = | $\frac{11}{5}$ of 240 = |

C

What is the value of A?
What is the value of B?



Two fashion designers receive $\frac{3}{8}$ of 208 metres of material.

One of them says:



We each receive 26 m

Is she correct?
Explain your reasoning.

Calculate the missing digits.

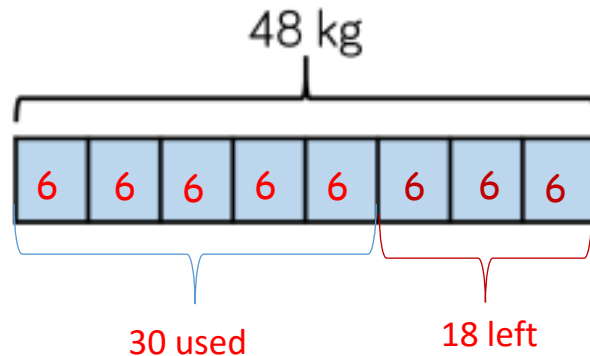
$$\frac{3}{8} \text{ of } 40 = \frac{?}{10} \text{ of } 150$$

$$\frac{1}{5} \text{ of } 315 = \frac{?}{8} \text{ of } 72$$

Answers

A

- A cook has 48 kg of potatoes. He uses $\frac{5}{8}$ of the potatoes. How many kilograms of the potatoes does he have left?
Use the bar model to find the answer to this question.



We need to find one part, so we divide the whole amount by 8 (the denominator)

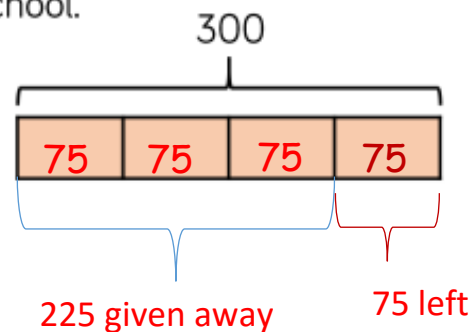
$48 \div 8 = 6$, so each part is worth 6.

The cook uses 5 parts - the numerator tells us this. $5 \times 6 = 30$. He has used 30 kg.

To find out how much is left, you can either subtract 30 from 48, or count the amount left on the bar model.

The answer is 18kg.

- A football team has 300 tickets to give away.
They give $\frac{3}{4}$ of them to a local school.
How many tickets are left?



To find one part (quarter), divide the whole amount by the denominator - 4.

$$300 \div 4 = 75$$

If $\frac{3}{4}$ were given away, then we know $\frac{1}{4}$ was left.

We already know $\frac{1}{4} = 75$

B



Calculate:

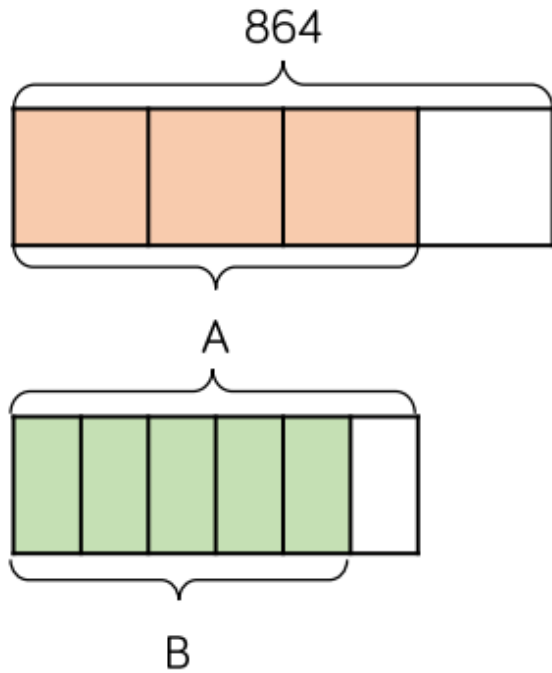
$$\frac{1}{5} \text{ of } 30 = 6 \quad \frac{1}{5} \text{ of } 60 = 12 \quad \frac{1}{5} \text{ of } 120 = 24 \quad \frac{1}{5} \text{ of } 240 = 48$$

$$\frac{2}{5} \text{ of } 30 = 12 \quad \frac{1}{5} \text{ of } 600 = 30 \quad \frac{1}{10} \text{ of } 120 = 12 \quad \frac{6}{5} \text{ of } 240 = 288$$

$$\frac{4}{5} \text{ of } 30 = 24 \quad \frac{1}{5} \text{ of } 6,000 = 1200 \quad \frac{1}{20} \text{ of } 120 = 6 \quad \frac{11}{5} \text{ of } 240 = 528$$

C

What is the value of A?
What is the value of B?



A = 648
B = 540

Two fashion designers receive $\frac{3}{8}$ of 208 metres of material.

One of them says:



We each receive 26 m

Is she correct?
Explain your reasoning.

She is incorrect because 26 is only one eighth of 208. She needs to multiply her answer by 3 so that they each get 78 m each.

Calculate the missing digits.

$$\frac{3}{8} \text{ of } 40 = \frac{?}{10} \text{ of } 150$$

1

$$\frac{1}{5} \text{ of } 315 = \frac{?}{8} \text{ of } 72$$

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