Fractions of numbers

Learn

Fractions are numbers. For example, $\frac{1}{2}$ of 10 is 5.

To find a fraction of a number, divide by the denominator (bottom number).

$$\frac{1}{4} \text{ of } 12 = 12 \div 4 = 3$$

$$\frac{1}{3} \text{ of } 18 = 18 \div 3 = 6$$

$$\frac{1}{8} \text{ of } 16 = 16 \div 8 = 2$$

If the numerator (top number) of the fraction you are finding is not 1, first divide by the denominator, then multiply by the numerator.

$$\frac{1}{4} \text{ of } 12 = 3$$

so $\frac{3}{4}$ of 12 = 3 × 3 = 9

$$\frac{1}{3} \text{ of } 18 = 6$$

so $\frac{2}{3}$ of 18 = 6 × 2 = 12

$$\frac{1}{8} \text{ of } 16 = 2$$
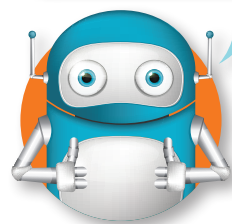
so $\frac{5}{8}$ of 16 = 2 × 5 = 10

✓ Tip

Divide the number by the denominator first, then multiply by the numerator if that is greater than 1. Use your multiplication facts to help you.

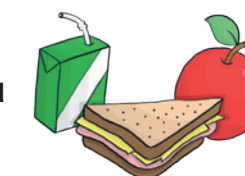Getting mixed up? I can help!

Talk maths

Look at the problems below and talk them through aloud, explaining each step in the answer.

There are 30 books on the shelf. The children take $\frac{2}{5}$ of the books. How many books did they take?

First find $\frac{1}{5}$ → 30 ÷ 5 = 6   Use your answer to find $\frac{2}{5}$ → 6 × 2 = 12
The children took 12 books.

There are 32 children in a class. $\frac{7}{8}$ of the children bring a packed lunch. How many children is that?

32 ÷ 8 = 4   4 × 7 = 28   28 children take a packed lunch to school.

Activities

Copy and answer these questions. Write number sentences to show how you solved them.

1. $\frac{1}{3}$ of 27   **2.** $\frac{2}{3}$ of 30   **3.** $\frac{6}{10}$ of 100

4. $\frac{3}{5}$ of 25   **5.** $\frac{5}{8}$ of 72   **6.** $\frac{9}{10}$ of 100

Problems

Brain-teaser
Harry has £36 in the bank. He spends $\frac{3}{4}$ of his money. How much does Harry spend?

Brain-buster
There are 80 litres of petrol in the car tank. After a journey, $\frac{5}{8}$ of the petrol has been used. How many litres of petrol are left in the tank?