

Fractions of a quantity



Divide by the denominator to find one group, then multiply by the numerator.

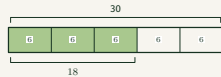
Name _____

Date _____

Divide, then multiply

To find a fraction of a quantity, divide the quantity by the denominator to find one group (the unit fraction), then multiply by the numerator to find the number of groups you need.

Worked example Find $\frac{3}{5}$ of 30 using the bar.

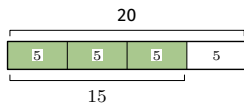


$$30 \div 5 = 6 \text{ (one group).}$$

$$3 \times 6 = 18.$$

$$\frac{3}{5} \text{ of } 30 = 18.$$

1. Use the bar to find $\frac{3}{4}$ of 20.

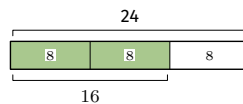


Solution

$$20 \div 4 = 5.$$

$$3 \times 5 = 15.$$

2. Use the bar to find $\frac{2}{3}$ of 24.



Solution

$$24 \div 3 = 8.$$

$$2 \times 8 = 16.$$

3. $\frac{1}{2}$ of 10.

Solution

$$10 \div 2 = 5. 1 \times 5 = 5.$$

4. $\frac{1}{3}$ of 21.

Solution

$$21 \div 3 = 7. 1 \times 7 = 7.$$

5. $\frac{1}{4}$ of 28.

Solution

$$28 \div 4 = 7. 1 \times 7 = 7.$$

6. $\frac{2}{3}$ of 15.

Solution

$$15 \div 3 = 5. 2 \times 5 = 10.$$

7. $\frac{3}{5}$ of 25.

Solution

$$25 \div 5 = 5. 3 \times 5 = 15.$$

8. $\frac{5}{6}$ of 24.

Solution

$$24 \div 6 = 4. 5 \times 4 = 20.$$

9. $\frac{3}{10}$ of 80.

Solution

$$80 \div 10 = 8. 3 \times 8 = 24.$$

Fractions of a quantity (continued)



Divide by the denominator to find one group, then multiply by the numerator.

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10. $\frac{2}{7}$ of 35.

Solution

$$35 \div 7 = 5. 2 \times 5 = 10.$$

11. Fill in the blank: $\frac{1}{4}$ of $\square$ is 9.

Solution

One quarter is 9, so the whole is $9 \times 4 = 36$.

12. Is $\frac{2}{3}$ of 18 equal to 6?

Solution

No: $18 \div 3 = 6, 2 \times 6 = 12$, not 6.

13. Which is greater: $\frac{2}{5}$ of 40 or $\frac{3}{10}$ of 40?

Solution

$\frac{2}{5}$ of 40 = 16. $\frac{3}{10}$ of 40 = 12.
 $\frac{2}{5}$ of 40 is greater.

14. A class has 30 students. $\frac{2}{5}$ are absent. How many students are absent?

Solution

$30 \div 5 = 6. 2 \times 6 = 12$ students.

15. A tank holds 60 L. It is $\frac{7}{10}$ full. How many litres?

Solution

$60 \div 10 = 6. 7 \times 6 = 42$ L.

16. A student says $\frac{3}{4}$ of 20 is 80. Are they correct? Explain.

Solution

No: $20 \div 4 = 5, 3 \times 5 = 15$, not 80.

17. Which does not belong: $\frac{1}{2}$ of 18, $\frac{2}{4}$ of 18, $\frac{3}{6}$ of 18, $\frac{2}{3}$ of 18?

Solution

$\frac{1}{2}, \frac{2}{4}, \frac{3}{6}$ of 18 all equal 9; $\frac{2}{3}$ of 18 = 12 does not belong.

18. A jar has 45 lollies. $\frac{4}{9}$ are red. How many red lollies?

Solution

$45 \div 9 = 5. 4 \times 5 = 20$ lollies.