# Multiplying and dividing fractions

## Free Extra Maths Class · Grade 7

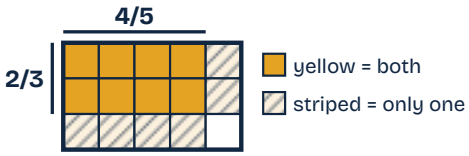
**Name:** _____

**Remember:** Multiply numerator × numerator and denominator × denominator. Change mixed numbers to improper fractions first. "Of" means ×.
**Why?** A fraction of a fraction is a piece of a piece – so the pieces get smaller and the denominator bigger.

**1.** Calculate: $\frac{2}{5} \times \frac{3}{7}$

**2.** Calculate $\frac{3}{4}$ of 28.

**3.** The picture shows $\frac{2}{3} \times \frac{4}{5}$. How many blocks are there in total? How many are yellow? What is the answer?




**4.** Calculate: $\frac{1}{2} \times \frac{5}{6}$

**5.** Calculate and simplify: $\frac{4}{9} \times \frac{3}{8}$

**6.** Nomsa has R84. She spends $\frac{5}{6}$ of it on a book. How much does the book cost?

**7.** Calculate: $2\frac{1}{2} \times \frac{3}{5}$

**8.** Calculate: $3 \times \frac{5}{6}$. Write the answer as a mixed number.

**9.** Calculate: $1\frac{1}{3} \times 2\frac{1}{4}$

**10.** Sipho walks $1\frac{3}{4}$ km to the sports grounds every day. How far does he walk in 4 days?

**11.** A ribbon is $\frac{5}{8}$ m long. Lerato uses $\frac{1}{3}$ of it. How long is the piece she uses?

**12.** Is $\frac{3}{5} \times \frac{7}{8}$ bigger or smaller than $\frac{7}{8}$? Work it out and explain in one sentence.

**13.** A farm is 120 ha in size. $\frac{3}{8}$ of the farm is maize. $\frac{2}{5}$ of the **rest** is sunflowers. How many hectares are sunflowers?

**14.** How many pieces of $\frac{3}{4}$ m can you cut from a plank 6 m long?

**15.** Calculate: $2\frac{1}{4} \div \frac{3}{5}$

**I got** _____ **out of 15** ☆ ☆ ☆

# Memorandum

## Multiplying and dividing fractions

Other correct methods are also right.

**1.** $\frac{6}{35}$

Numerator × numerator, denominator × denominator: $\frac{2}{5} \times \frac{3}{7} = \frac{2 \times 3}{5 \times 7} = \frac{6}{35}$

**2.** **21**

28 ÷ 4 = 7; 7 × 3 = 21

**3.** **15 blocks, 8 yellow;** $\frac{8}{15}$

3 rows × 5 columns = 15 blocks; 2 × 4 = 8 yellow → $\frac{8}{15}$

**4.** $\frac{5}{12}$

$\frac{1}{2} \times \frac{5}{6} = \frac{1 \times 5}{2 \times 6} = \frac{5}{12}$

**5.** $\frac{1}{6}$

$\frac{4}{9} \times \frac{3}{8} = \frac{4 \times 3}{9 \times 8} = \frac{12}{72} = \frac{1}{6}$ (÷ 12)

**6.** **R70**

R84 ÷ 6 = R14; R14 × 5 = R70

**7.** $1\frac{1}{2}$

$\frac{5}{2} \times \frac{3}{5} = \frac{15}{10} = 1\frac{1}{2}$

**8.** $2\frac{1}{2}$

$3 \times \frac{5}{6} = \frac{3 \times 5}{6} = \frac{15}{6} = 2\frac{1}{2}$

**9.** **3**

$\frac{4}{3} \times \frac{9}{4} = \frac{36}{12} = 3$

**10.** **7 km**

$\frac{7}{4} \times 4 = \frac{28}{4} = 7$ km

**11.** $\frac{5}{24}$ **m**

"Of" means ×: $\frac{1}{3} \times \frac{5}{8} = \frac{1 \times 5}{3 \times 8} = \frac{5}{24}$ m

**12.** **Smaller:** $\frac{21}{40} < \frac{35}{40}$

$\frac{7}{8} = \frac{35}{40}$. We take only $\frac{3}{5}$ of $\frac{7}{8}$, and $\frac{3}{5}$ is smaller than 1, so the answer gets smaller.

**13.** **30 ha**

Maize: $\frac{3}{8} \times 120 = 45$ ha; rest = 120 − 45 = 75 ha; $\frac{2}{5} \times 75 = 30$ ha

**14.** **8**

Keep, change, flip: $6 \div \frac{3}{4} = 6 \times \frac{4}{3} = \frac{24}{3} = 8$

**15.** $3\frac{3}{4}$

$\frac{9}{4} \div \frac{3}{5} = \frac{9}{4} \times \frac{5}{3} = \frac{45}{12} = 3\frac{3}{4}$