

## Division of Fractions



How many.... in ....


$$
\frac{4}{5} \div \frac{2}{3}=1 \frac{2}{10}=1 \frac{1}{5}
$$

how many fit?



$$
\frac{1}{2}: \frac{1}{7}=\text { (0) }
$$

## L.O. Divide fractions by whole numbers

Remember that division can be interpreted as finding a fraction ( $\div 2$ means halving; $\div 3$ means finding a third etc.).
$\frac{1}{3} \div 2$ can therefore be interpreted as "what is a half of $\frac{1}{3}$ ?"

Divide proper fractions by whole numbers
(e.g. $1 / 3 \div 2=1 / 6$ ).


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Remember that a fraction has a decimal equivalent.
L.O. Divide fractions by whole numbers.

$$
\frac{1}{2} \div 3=\frac{1}{6}
$$



How do we calculate this?
The numerator stays the same.
What happens to the denominator. Why?
Draw an image to help.
USE EXAMPLES THAT
HALVE FRACTIONS!!!!!

$$
\begin{array}{|l|l|l|l|l|l|l|l|l|}
\hline & & & \\
\hline
\end{array} \frac{2}{5} \div 4=\frac{\chi}{20} \frac{1}{10} \begin{array}{|l|l|l|l|}
\hline & \ldots & \cdots & \cdots \\
\hline
\end{array}
$$

$$
\begin{array}{ll}
\frac{2}{5} \div 4=\frac{2}{20}= & \square \\
\frac{1}{4} \div 3= & \frac{2}{5} \div 4=\frac{y}{20} \\
\frac{3}{8} \div 2= & \frac{2}{10} \div 4=
\end{array}
$$

Work out

Copy and complete.
(1) $\frac{1}{2} \div 3=\frac{1}{2 \times 3}=\frac{1}{\square}$
(2) $\frac{1}{4} \div 5=\frac{1}{4 \times \square}=\frac{1}{\square}$
(3) $\frac{1}{6} \div 2=\frac{1}{\square \times \square}=\frac{1}{\square}$
(4) $\frac{1}{3} \div 6=\frac{\square}{\square \times \square}=\frac{\square}{\square}$
(5) $\frac{3}{4} \div 4=\frac{3}{4 \times 4}=\frac{3}{\square}$
(6) $\frac{2}{5} \div 3=\frac{2}{5 \times \square}=\frac{2}{\square}$
(7) $\frac{3}{7} \div 2=\frac{3}{\square \times \square}=\frac{3}{\square}$
(8) $\frac{5}{6} \div 6=\frac{\square}{\square \times \square}=\frac{\square}{\square}$
(9) $\frac{1}{2} \div 8 \quad$ (13) $\frac{5}{8} \div 2$
(10) $\frac{1}{5} \div 2$
(14) $\frac{2}{3} \div 5$
(11) $\frac{1}{4} \div 3$
(15) $\frac{3}{5} \div 4$
(12) $\frac{1}{10} \div 4$ (16) $\frac{4}{11} \div 3$
.
Simplify before multiplying.
(1) $\frac{3}{4} \div 9=\frac{3^{1}}{4 \times 9^{3}}=\frac{\square}{\square}$
(2) $\frac{8}{9} \div 2=\frac{8}{9 \times 2}=\frac{\square}{\square}$
(3) $\frac{2}{3} \div 7=\frac{\square}{\square \times 7}=\frac{\square}{\square}$
(4) $\frac{9}{10} \div 12=\frac{9}{\square \times \square}=\frac{\square}{\square}$
(5) $\frac{3}{5} \div 5=\frac{\square}{\square \times \square}=\frac{\square}{\square}$
(6) $\frac{6}{7} \div 8=\frac{\square}{\square \times \square}=\frac{\square}{\square}$
(7) $\frac{2}{9} \div 4=\frac{\square}{\square \times \square}=\frac{\square}{\square}$
(8) $\frac{2}{3} \div 10=\frac{\square}{\square \times \square}=\frac{\square}{\square}$

Work out
(9) $\frac{5}{8} \div 11 \quad 13 \frac{5}{6} \div 10$
(10) $\frac{9}{10} \div 6 \quad 14 \frac{3}{4} \div 7$
(11) $\frac{6}{7} \div 9$ (15) $\frac{6}{11} \div 3$
(12) $\frac{4}{5} \div 12$
(16) $\frac{4}{9} \div 8$

Change to an improper fraction and divide.
(1) $5 \frac{3}{5} \div 4$
(2) $7 \frac{1}{2} \div 5$
(3) $2 \frac{4}{7} \div 6$
(4) $4 \frac{3}{8} \div 7$
(5) $2 \frac{8}{11} \div 3$
(6) $7 \frac{1}{5} \div 12$
(7) $3 \frac{5}{9} \div 2$
(8) $6 \frac{2}{3} \div 8$

Work out the bracket and divide.
(9) $\left(\frac{1}{5}+\frac{7}{10}\right) \div 3$
$10\left(\frac{7}{9}-\frac{1}{3}\right) \div 2$
(11) $\left(\frac{3}{4} \times \frac{1}{2}\right) \div 6$
(12) $\left(4 \frac{8}{9} \div 11\right) \div 8$
(13) $\left(\frac{2}{3}+\frac{1}{12}\right) \div 9$
$14\left(\frac{6}{7}-\frac{2}{5}\right) \div 4$
(15) $\left(\frac{2}{3} \times \frac{9}{10}\right) \div 12$
(16) $\left(2 \frac{5}{8} \div 7\right) \div 3$

There is one third of a pizza left over. If it was shared equally between four people what fraction of the whole pizza would each person receive?

$$
\begin{aligned}
& \text { Page } 47 \\
& \text { A } \\
& \begin{array}{llrl}
\mathbf{1} \frac{1}{6} & \mathbf{5} \frac{3}{16} & \mathbf{9} \frac{1}{16} & \mathbf{1 3} \frac{5}{16} \\
\mathbf{2} \frac{1}{20} & \mathbf{6} \frac{2}{15} & \mathbf{1 0} \frac{1}{10} & \mathbf{1 4} \frac{2}{15} \\
\mathbf{3} \frac{1}{12} & \mathbf{7} \frac{3}{14} & \mathbf{1 1} \frac{1}{12} & \mathbf{1 5} \frac{3}{20} \\
\mathbf{4} \frac{1}{18} & \mathbf{8} \frac{5}{36} & \mathbf{1 2} \frac{1}{40} & \mathbf{1 6} \frac{4}{33}
\end{array}
\end{aligned}
$$

$1 \frac{1}{12}$
$2 \frac{4}{9}$
$3 \frac{2}{21}$
$4 \frac{3}{40}$
C
$11 \frac{2}{5}$
$21 \frac{1}{2}$
$3 \frac{3}{7}$
$4 \frac{5}{8}$
$5 \frac{10}{11}$
$9 \frac{3}{10}$
$13 \frac{1}{12}$
$14 \frac{4}{35}$
$15 \frac{1}{20}$
$8 \frac{5}{6}$
$12 \frac{1}{18}$
$16 \frac{1}{8}$

