Maths Mastery
Divide Proper Fractions by Whole Numbers

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Explain

Explain, using visual representations, why:

$$\frac{2}{3} \div 4 = \frac{1}{6}$$

Divide

Find the answers to the following:

$\frac{1}{3} \div 5 =$ $\frac{5}{6} \div 5 =$ $\frac{3}{4} \div 7 =$ $\frac{4}{7} \div 3 =$ $\frac{1}{2} \div 50 =$

$\frac{4}{5} \div 3 =$ $\frac{7}{10} \div 4 =$ $\frac{3}{10} \div 12 =$ $\frac{7}{15} \div 5 =$ $\frac{1}{50} \div 2 =$

$\frac{7}{8} \div 4 =$ $\frac{2}{3} \div 9 =$ $\frac{11}{12} \div 8 =$ $\frac{1}{10} \div 14 =$

Same Answer

Explain, using visual representations, why:

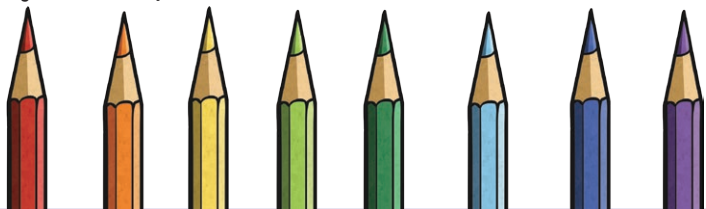$$\frac{1}{3} \div 5 = \frac{1}{5} \div 3$$

Colouring Pencils

A teacher divides a box of pencils so one group has $\frac{3}{5}$ of the pencils and another has $\frac{2}{5}$ of the pencils.

The first group has **6** children. The second group has **4** children.

Each group divided their pencils equally among the children in the group. In which group do the children have the biggest fraction of all the pencils?
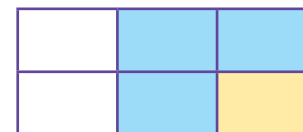
Explain **Answers**

Explain, using visual representations, why:

$$\frac{2}{3} \div 4 = \frac{1}{6}$$

$\frac{2}{3}$ can be drawn as $\frac{4}{6}$

$$\frac{4}{6} \div 4 = \frac{1}{6}$$

Divide **Answers**

Find the answers to the following:

$\frac{1}{3} \div 5 = \frac{\textbf{1}}{\textbf{15}}$ $\frac{5}{6} \div 5 = \frac{\textbf{1}}{\textbf{6}}$ $\frac{3}{4} \div 7 = \frac{\textbf{3}}{\textbf{28}}$ $\frac{4}{7} \div 3 = \frac{\textbf{4}}{\textbf{21}}$ $\frac{1}{2} \div 50 = \frac{\textbf{1}}{\textbf{100}}$

$\frac{4}{5} \div 3 = \frac{\textbf{4}}{\textbf{15}}$ $\frac{7}{10} \div 4 = \frac{\textbf{7}}{\textbf{40}}$ $\frac{3}{10} \div 12 = \frac{\textbf{1}}{\textbf{40}}$ $\frac{7}{15} \div 5 = \frac{\textbf{7}}{\textbf{75}}$ $\frac{1}{50} \div 2 = \frac{\textbf{1}}{\textbf{100}}$

$\frac{7}{8} \div 4 = \frac{\textbf{7}}{\textbf{32}}$ $\frac{2}{3} \div 9 = \frac{\textbf{2}}{\textbf{27}}$ $\frac{11}{12} \div 8 = \frac{\textbf{11}}{\textbf{96}}$ $\frac{1}{10} \div 14 = \frac{\textbf{1}}{\textbf{140}}$

Same Answer **Answers**

Explain, using visual representations, why:

$$\frac{1}{3} \div 5 = \frac{1}{5} \div 3$$
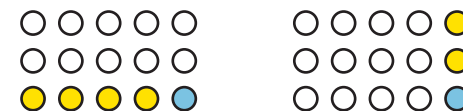
Take 15 circles. $\frac{1}{3}$ is 5 circles. 5 ÷ 5 = 1 circle.

Take 15 circles. $\frac{1}{5}$ is 3 circles. 3 ÷ 3 = 1 circle.

Colouring Pencils

A teacher divides a box of pencils so one group has $\frac{3}{5}$ of the pencils and another has $\frac{2}{5}$ of the pencils.

The first group has 6 children. The second group has 4 children.

Each group divided their pencils equally among the children in the group. In which group do the children have the biggest fraction of all the pencils?

$$\frac{3}{5} \div 6 = \frac{3}{30} = \frac{1}{10} \qquad \frac{2}{5} \div 4 = \frac{2}{20} = \frac{1}{10}$$

They each have the same fraction of all the pencils.

What do you know about how many pencils there are altogether?

Must be a multiple of 10 to be divided into tenths.

Write your own problem that must be solved by dividing fractions by a whole number. Ask a partner to solve it.

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