

Warm-Up

① $\frac{3}{4} \times \frac{12}{7} = \frac{6}{28}$ (4) $1\frac{1}{4} \times \frac{2}{3}$
 $\frac{24}{4} = \frac{3}{14}$

② $\frac{24}{5} \times \frac{12}{63}$ (5) $2\frac{1}{3} \times 1\frac{1}{2}$
 $\frac{24}{5} = \frac{2}{3}$

③ $4 \times \frac{6}{7} = \frac{24}{7} = 3\frac{3}{7}$
 $1\frac{1}{2} \times \frac{18}{2} = 3\frac{1}{2}$

Sep 21-10:32 AM

Dividing Fractions

What is dividing?
Opposite of multiplication.
Split into groups of equal size.

Sep 19-21:11

Think about what the following mean:

$24 \div 3 \rightarrow$ Divide 24 into 3 equal groups

$60 \div 12 \rightarrow$ Divide 60 into 12 equal groups

$9 \div 2 \rightarrow$ Divide 9 into 2 equal groups

$2 \div \frac{1}{4} \rightarrow ?$

$2 \div \frac{1}{4} = 8$
 8 quarters make 2

Sep 19-21:20

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

$= 2\frac{2}{3}$

Sep 19-21:21

$2\frac{1}{3} \div \frac{1}{2}$
 $= \frac{7}{3} \div \frac{1}{2}$

$= 4\frac{2}{3}$

Sep 19-21:21

$\frac{2}{3} \div \frac{4}{5}$

$= 0\frac{10}{12} = \frac{5}{6}$

Sep 19-21:21

Can you see any patterns in the answers?

$$\frac{2}{3} \div \frac{1}{4} = \frac{8}{3} = 2\frac{2}{3}$$

$$2\frac{1}{3} \div \frac{1}{2} = \frac{14}{3} = 4\frac{2}{3}$$

$$\frac{2}{3} \div \frac{4}{5} = \frac{10}{12} = \frac{5}{6}$$

Sep 19-21:24

So in terms of a generalisation, we can say that dividing by a fraction will give the same result as multiplying the first fraction by the **RECIPROCAL** of the second fraction.

Note: The reciprocal is the name given to a fraction that has flipped upside down.

$$\frac{1}{2} \rightarrow \frac{2}{1} \quad \frac{3}{4} \rightarrow \frac{4}{3}$$

$$\frac{2}{3} \rightarrow \frac{3}{2} \quad 3 \rightarrow \frac{1}{3}$$

Sep 19-21:24

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

$$= \frac{3}{4} \times \frac{2}{1}$$

change \div to \times

find the reciprocal of the divisor [what you are dividing by]

Then do the multiplication

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

Sep 21-11:46 AM

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

$$= \frac{7}{2} \div \frac{1}{3}$$

$$= \frac{7}{2} \times \frac{3}{1}$$

$$= \frac{21}{2} = 10\frac{1}{2}$$

Change mixed numbers to improper fractions

Sep 21-11:49 AM

Practice Questions

Section B - #s 6-10

Section C - #s 11-15 & 21-25

Section D - #s 24, 28 & 32

Sep 19-21:27