

Equivalent Fractions. Part 2

Think back to the patterns we saw yesterday. Let's look at one half or $1/2$.

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{6}{12} = \frac{8}{16} = \frac{16}{32} = \frac{32}{64} = \frac{64}{128} = \frac{20}{40} = \frac{50}{100} = \frac{100}{200}$$

If I start with $2/4$ and I need to make an equivalent out of twelfths...

$$\frac{2}{4} = \frac{?}{12}$$

Here, I was given the denominator and not the numerator. I have looked at the relationship between the two denominators to work out what I need to do to my numerator.

I know that 4 goes into 12, 3 times ($4 \times 3 = 12$), so I can multiply the top and bottom by 3

$$\begin{aligned} 2 (\times 3) &= 6 \\ 4 (\times 3) &= 12 \end{aligned}$$

If I wanted to find the equivalent of $5/6$ but I had only been given the numerator (10) then I use the relationship between the two numerators to work out what to do with my denominator. So I know 5 goes into 10, 2 times.
 $5 \times 2 = 10$. So I need to also multiply the bottom by 2.

$$\frac{5}{6} = \frac{10}{?}$$

$$\begin{aligned} 5 (\times 2) &= 10 \\ 6 (\times 2) &= 12 \end{aligned}$$

The same must be true in reverse. To find the equivalent fraction of $8/10$ into fifths (5) I must divide!

$$\frac{8}{10} = \frac{?}{5} \quad \text{I know } 10 \div 2 = 5 \text{ so I need to do the same to the numerator.} \quad \begin{aligned} 8 (\div 2) &= 4 \\ 10 (\div 2) &= 5 \end{aligned}$$

TOP TIP: WHATEVER YOU DO TO THE TOP (NUMERATOR), YOU MUST ALSO DO TO THE BOTTOM (DENOMINATOR)!

Choose one of the tasks...

B

Copy and complete.

- | | |
|--|---------------------------------------|
| 1 $\frac{1}{2} = \frac{\square}{6}$ | 9 $\frac{2}{6} = \frac{4}{\square}$ |
| 2 $\frac{3}{4} = \frac{\square}{12}$ | 10 $\frac{1}{3} = \frac{2}{\square}$ |
| 3 $\frac{1}{3} = \frac{\square}{9}$ | 11 $\frac{1}{2} = \frac{50}{\square}$ |
| 4 $\frac{3}{10} = \frac{\square}{100}$ | 12 $\frac{3}{4} = \frac{6}{\square}$ |
| 5 $\frac{3}{6} = \frac{\square}{12}$ | 13 $\frac{4}{5} = \frac{8}{\square}$ |
| 6 $\frac{1}{4} = \frac{\square}{8}$ | 14 $\frac{2}{3} = \frac{6}{\square}$ |
| 7 $\frac{1}{5} = \frac{\square}{10}$ | 15 $\frac{1}{4} = \frac{3}{\square}$ |
| 8 $\frac{2}{3} = \frac{\square}{12}$ | 16 $\frac{5}{6} = \frac{10}{\square}$ |

Write the odd one out in each set of fractions.

17 $\frac{4}{12}$ $\frac{3}{8}$ $\frac{2}{6}$ $\frac{3}{9}$

18 $\frac{5}{10}$ $\frac{6}{12}$ $\frac{2}{5}$ $\frac{3}{6}$

19 $\frac{8}{12}$ $\frac{75}{100}$ $\frac{9}{12}$ $\frac{6}{8}$

20 $\frac{9}{12}$ $\frac{8}{12}$ $\frac{4}{6}$ $\frac{6}{9}$

C

Copy and complete.

- | | |
|--|--|
| 1 $\frac{5}{8} = \frac{\square}{16}$ | 9 $\frac{25}{100} = \frac{\square}{4}$ |
| 2 $\frac{3}{4} = \frac{\square}{20}$ | 10 $\frac{10}{15} = \frac{\square}{3}$ |
| 3 $\frac{2}{7} = \frac{\square}{14}$ | 11 $\frac{12}{20} = \frac{\square}{5}$ |
| 4 $\frac{7}{10} = \frac{\square}{100}$ | 12 $\frac{8}{16} = \frac{\square}{2}$ |
| 5 $\frac{4}{9} = \frac{8}{\square}$ | 13 $\frac{55}{100} = \frac{11}{\square}$ |
| 6 $\frac{3}{5} = \frac{30}{\square}$ | 14 $\frac{5}{25} = \frac{1}{\square}$ |
| 7 $\frac{5}{8} = \frac{10}{\square}$ | 15 $\frac{14}{18} = \frac{7}{\square}$ |
| 8 $\frac{4}{5} = \frac{80}{\square}$ | 16 $\frac{45}{50} = \frac{9}{\square}$ |

Write the odd one out in each set of fractions.

17 $\frac{5}{20}$ $\frac{4}{10}$ $\frac{2}{8}$ $\frac{25}{100}$

18 $\frac{80}{100}$ $\frac{20}{24}$ $\frac{12}{15}$ $\frac{16}{20}$

19 $\frac{6}{60}$ $\frac{3}{18}$ $\frac{2}{12}$ $\frac{5}{30}$

20 $\frac{12}{16}$ $\frac{15}{20}$ $\frac{8}{12}$ $\frac{75}{100}$