

Use the pattern to find 5 fractions equivalent to the given fraction.

	$\times \frac{2}{2}$	$\times \frac{3}{3}$	$\times \frac{4}{4}$	$\times \frac{5}{5}$	$\times \frac{6}{6}$
1.	$\frac{1}{4}$	$\frac{1 \times 2}{4 \times 2} = \frac{2}{8}$			
2.	$\frac{1}{5}$				
3.	$\frac{1}{6}$				
4.	$\frac{1}{8}$				
5.	$\frac{1}{10}$				
6.	$\frac{3}{4}$				
7.	$\frac{2}{5}$				
8.	$\frac{5}{6}$				
9.	$\frac{3}{8}$				
10.	$\frac{7}{10}$				

$$\frac{3}{5} = \frac{\square}{10}$$

5 times what number is 10?

$$\frac{3}{5} \begin{matrix} \text{ } \\ \text{ } \end{matrix} \begin{matrix} \text{ } \\ \text{ } \end{matrix} = \frac{\square}{10}$$

3 times 2 is 6

$$\frac{3}{5} \begin{matrix} \text{x 2} \\ \text{x 2} \end{matrix} = \frac{6}{10}$$

Change to equivalent fractions with the given denominators.

1.  $\frac{3}{8} = \frac{\quad}{16}$

2.  $\frac{2}{5} = \frac{\quad}{10}$

3.  $\frac{2}{3} = \frac{\quad}{9}$

4.  $\frac{1}{2} = \frac{\quad}{8}$

5.  $\frac{3}{4} = \frac{\quad}{20}$

6.  $\frac{1}{5} = \frac{\quad}{25}$

7.  $\frac{2}{3} = \frac{\quad}{18}$

8.  $\frac{3}{4} = \frac{\quad}{8}$

9.  $\frac{2}{7} = \frac{\quad}{14}$

10.  $\frac{2}{5} = \frac{\quad}{40}$

11.  $\frac{1}{8} = \frac{\quad}{16}$

12.  $\frac{7}{10} = \frac{\quad}{20}$

13.  $\frac{5}{6} = \frac{\quad}{30}$

14.  $\frac{5}{12} = \frac{\quad}{24}$

15.  $\frac{9}{10} = \frac{\quad}{100}$

16.  $\frac{2}{3} = \frac{\quad}{12}$

17.  $\frac{7}{15} = \frac{\quad}{45}$

18.  $\frac{7}{11} = \frac{\quad}{22}$

19.  $\frac{14}{15} = \frac{\quad}{30}$

20.  $\frac{10}{12} = \frac{\quad}{48}$

21.  $\frac{3}{4} = \frac{\quad}{16}$

22.  $\frac{3}{5} = \frac{\quad}{50}$

23.  $\frac{5}{6} = \frac{\quad}{18}$

24.  $\frac{4}{9} = \frac{\quad}{27}$

A. Which fraction is **not** equivalent to  $\frac{2}{3}$ :  $\frac{4}{6}$ ,  $\frac{8}{10}$ ,  $\frac{8}{12}$

B. Which fraction is **not** equivalent to  $\frac{3}{5}$ :  $\frac{6}{10}$ ,  $\frac{9}{12}$ ,  $\frac{9}{15}$

# Equal ratios



You can find equal ratios by multiplying or dividing both numbers of a ratio by the same number (other than zero).

$$\frac{2}{3} \xrightarrow{\times 4} \frac{8}{12}$$

$\frac{2}{3}$  and  $\frac{8}{12}$  are equal ratios.

$$\frac{10}{14} \xrightarrow{\div 2} \frac{5}{7}$$

$\frac{10}{14}$  and  $\frac{5}{7}$  are equal ratios.

Multiply the numbers of each ratio by the number on the top box to complete a set of equal ratios.

	x2	x3	x4	x5	x6	x7	x8	x9
1. $\frac{1}{4} =$	_____	_____	_____	_____	_____	$\frac{7}{28} =$	_____	_____
2. $\frac{3}{5} =$	_____	_____	_____	_____	_____	_____	_____	_____
3. $\frac{4}{3} =$	_____	_____	_____	_____	_____	_____	_____	_____

Complete the missing number.

4.  $\frac{1}{2} = \frac{\square}{8}$     5.  $\frac{5}{10} = \frac{1}{\square}$     6.  $\frac{3}{8} = \frac{\square}{24}$     7.  $\frac{1}{3} = \frac{\square}{9}$

8.  $\frac{3}{12} = \frac{\square}{4}$     9.  $\frac{18}{6} = \frac{3}{\square}$     10.  $\frac{12}{18} = \frac{\square}{6}$     11.  $\frac{3}{4} = \frac{\square}{24}$

12.  $\frac{35}{10} = \frac{7}{\square}$     13.  $\frac{4}{16} = \frac{\square}{4}$     14.  $\frac{36}{24} = \frac{9}{\square}$     15.  $\frac{24}{30} = \frac{4}{\square}$

## Equivalent fractions in lowest terms

You can find equivalent fractions by comparing shaded parts.



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

You can find equivalent fractions by using the pattern for equivalence.

$$\frac{4}{6} \begin{matrix} \div 2 \\ \div 2 \end{matrix} = \frac{2}{3}$$

$\frac{2}{3}$  is in lowest terms because there are no common factors for 2 and 3 except 1.

Change to lowest terms.

1.  $\frac{6}{10}$

2.  $\frac{5}{15}$

3.  $\frac{20}{25}$

4.  $\frac{15}{25}$

5.  $\frac{4}{10}$

6.  $\frac{10}{15}$

7.  $\frac{2}{12}$

8.  $\frac{20}{25}$

9.  $\frac{2}{8}$

10.  $\frac{2}{6}$

11.  $\frac{10}{12}$

12.  $\frac{6}{8}$

13.  $\frac{2}{4}$

14.  $\frac{5}{10}$

15.  $\frac{6}{8}$

16.  $\frac{8}{10}$

17.  $\frac{3}{12}$

18.  $\frac{2}{10}$

Find the Mystery Fraction

19. My numerator is 3.

I am equivalent to  $\frac{9}{12}$ .

\_\_\_\_\_

20. My denominator is 10.

I am equivalent to  $\frac{3}{5}$ .

\_\_\_\_\_

21. Make up your own rules for a Mystery Number.

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