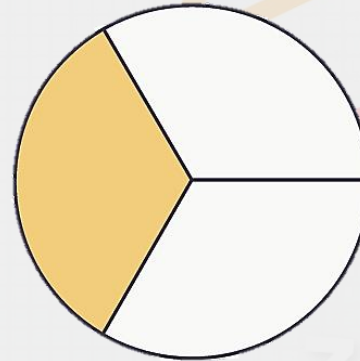
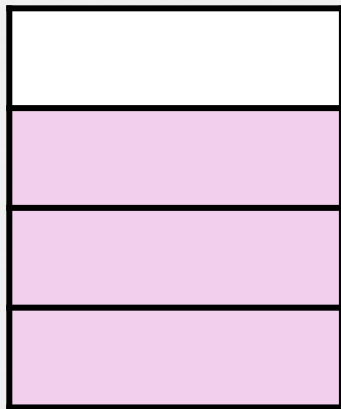
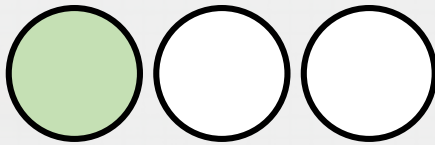


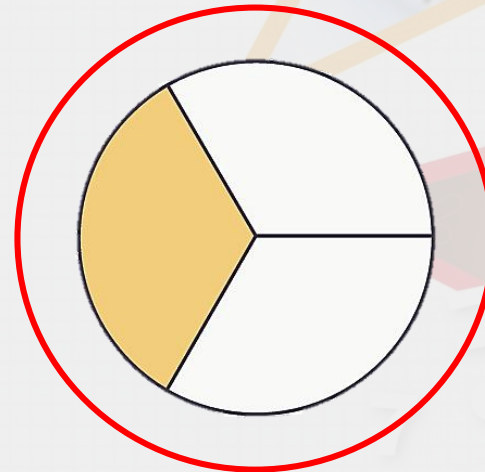
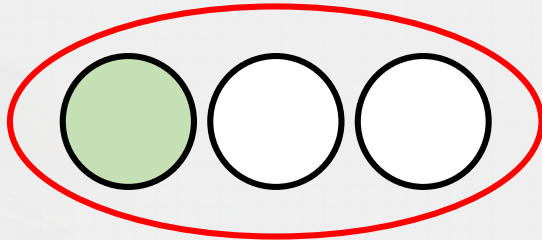
# Lesson 2: Equivalent Fractions

Let's start warming those brains up!

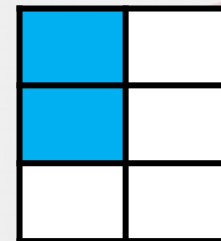
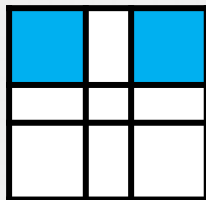
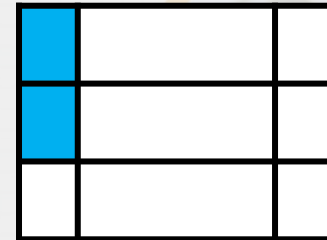
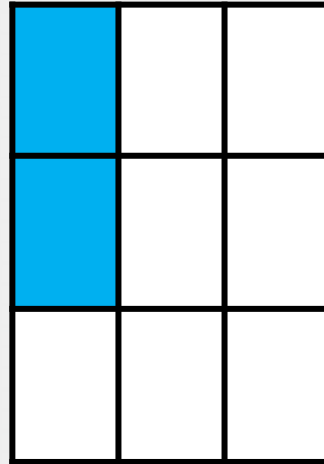
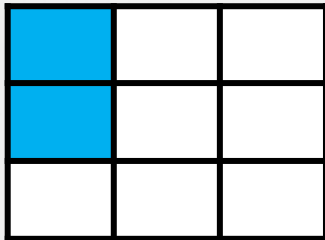
Circle the different representations of  $\frac{1}{3}$  below.



Circle the different representations of  $\frac{1}{3}$  below.

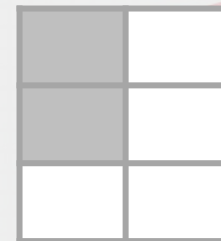
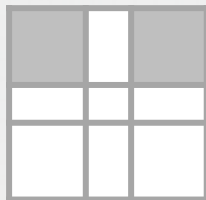
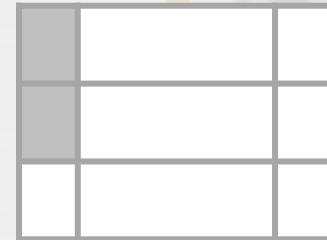
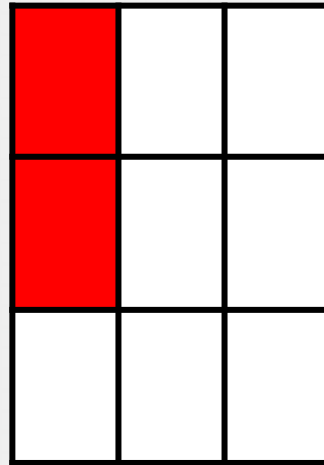
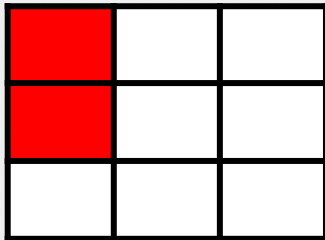


Which images show  $\frac{2}{9}$  ?



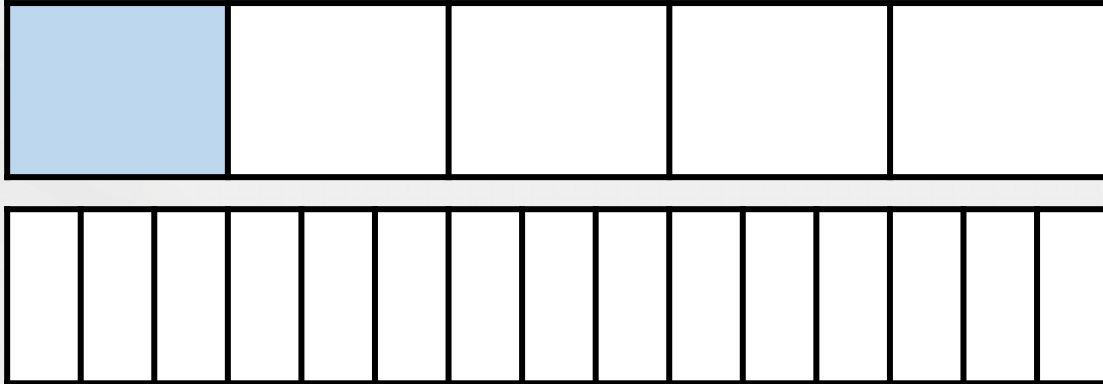


Which images show  $\frac{2}{9}$  ?



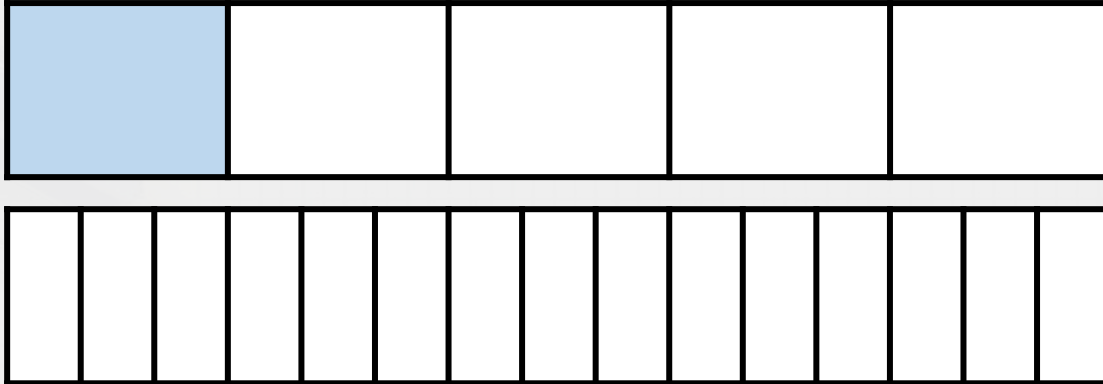
$\frac{2}{9}$  is 2 of 9 equal parts.

Complete the diagram to show the equivalent fraction.



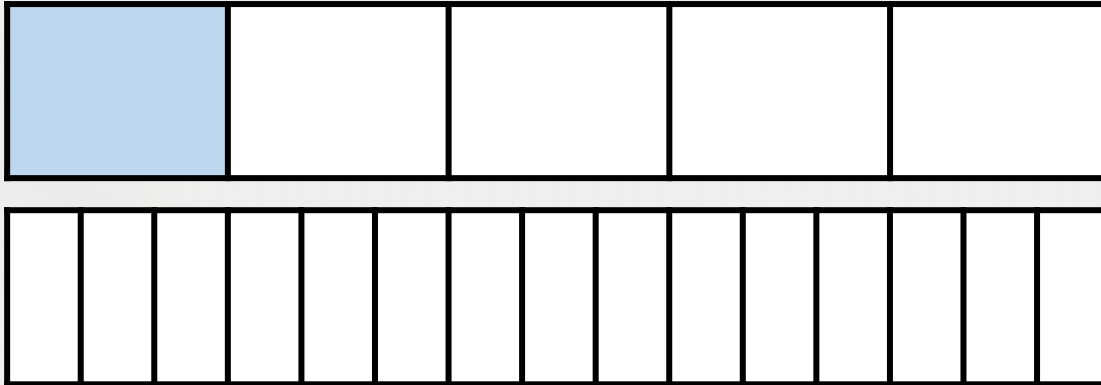
What is the fraction in the first diagram?

Complete the diagram to show the equivalent fraction.



What is the fraction in the first diagram?  $\frac{1}{5}$

Complete the diagram to show the equivalent fraction.

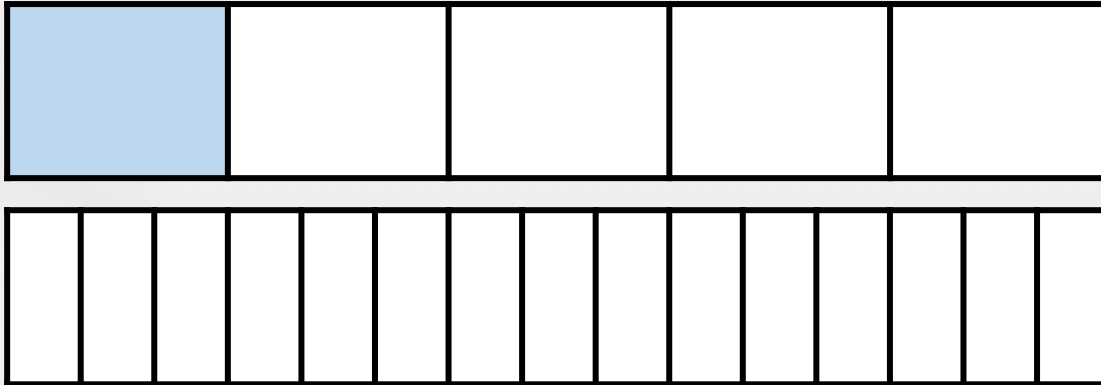


What is the fraction in the first diagram?  $\frac{1}{5}$

Now work out the denominator for the second diagram.



Complete the diagram to show the equivalent fraction.



What is the fraction in the first diagram?  $\frac{1}{5}$

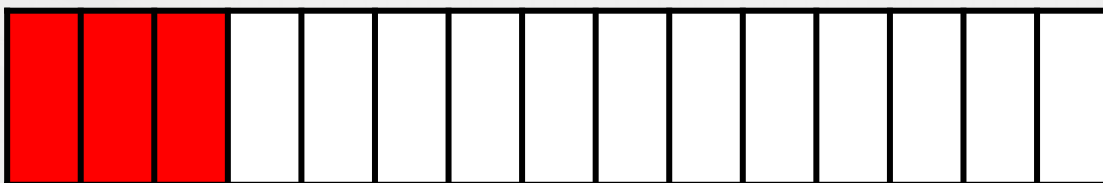
Now work out the denominator for the second diagram.  $\frac{\quad}{15}$

Discuss/think- How can we find the denominator?

Complete the diagram to show the equivalent fraction.



$$\frac{1}{5}$$



$$\frac{3}{15}$$

What is the fraction in the first diagram?  $\frac{1}{5}$

Now work out the denominator for the second diagram.  $\frac{\quad}{15}$

Discuss/think- How can we find the denominator?

Because the shapes are the same size. We can colour in the same amount. Now count how many sections are coloured in. This is your numerator.  $\frac{3}{\quad}$

Using your knowledge of multiples how many equivalent fractions can you create?

Write a fraction which is equivalent to  $\frac{1}{6}$ .

$$\frac{1}{6} \times \frac{2}{2} = \frac{2}{12}$$

Don't forget the golden rule:

What you multiply the numerator by you multiply the denominator by.

$$\frac{1}{6} \times \frac{3}{3} = \frac{3}{18}$$

Did you find some of the same ones I did?

Write a fraction which is equivalent to  $\frac{1}{6}$ .

Various answers, for example:

$\frac{2}{12}$	$\frac{3}{18}$	$\frac{4}{24}$	$\frac{5}{30}$	$\frac{6}{36}$
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Now lets try looking at some equivalent fractions using our knowledge of multiplication.

$$\frac{1}{7} \times \frac{\square}{\square} = \frac{4}{28}$$

What have the numerator and denominator been multiplied by to make the equivalent fraction?

What have the numerator and denominator been multiplied by to make the equivalent fraction?

$$\frac{1}{7} \times \frac{4}{4} = \frac{4}{28}$$

Circle the fractions which are equivalent to  $\frac{1}{4}$ .

$$\frac{4}{16}$$

$$\frac{4}{8}$$

$$\frac{2}{8}$$

$$\frac{2}{5}$$

$$\frac{3}{12}$$

How could we work this one out???????

Using our knowledge of multiples .....of course.

Circle the fractions which are equivalent to  $\frac{1}{4}$ .

$$\frac{4}{16}$$

$$\frac{4}{8}$$

$$\frac{2}{8}$$

$$\frac{3}{12}$$

$$\frac{2}{5}$$

$$\frac{1}{4} \times \boxed{4} = \frac{4}{16}$$

Remember it might  
not always be 4

Try this with each fraction.

Don't forget the golden rule:

What you multiply the  
numerator by you multiply  
the denominator by.



Were you correct?

Circle the fractions which are equivalent to  $\frac{1}{4}$ .

$$\frac{4}{16}$$

$$\frac{4}{8}$$

$$\frac{2}{8}$$

$$\frac{2}{5}$$

$$\frac{3}{12}$$

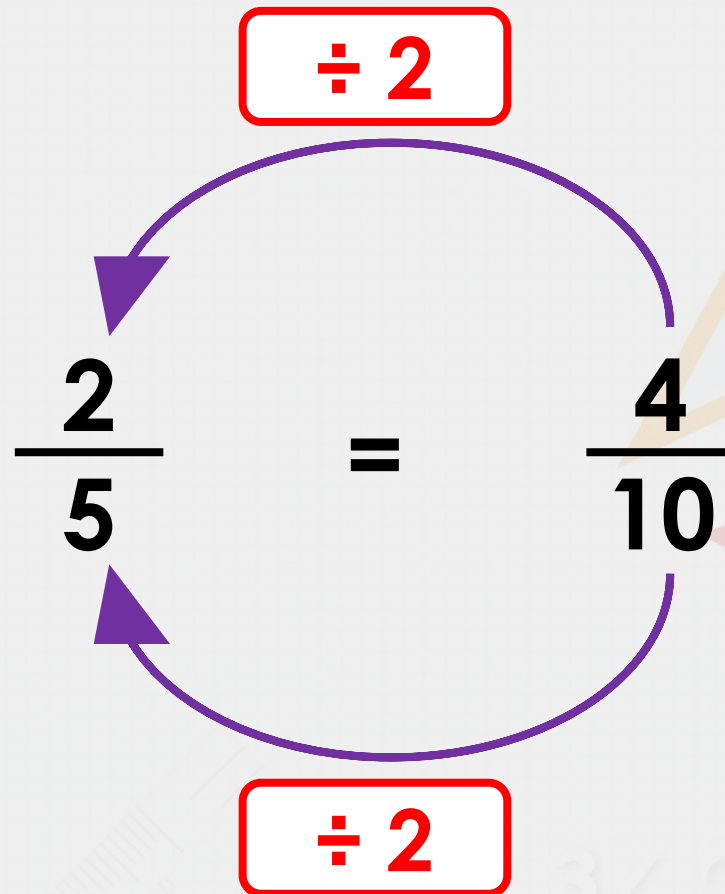
Fill in the missing divisor.

$$\frac{2}{5} = \frac{4}{10}$$

$\div ?$

$\div ?$

Fill in the missing divisor.



Match the equivalent fractions.

$$\frac{2}{5}$$

$$\frac{9}{99}$$

$$\frac{1}{11}$$

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

$$\frac{6}{9}$$

$$\frac{6}{15}$$



Match the equivalent fractions.

The diagram shows three fractions on the left and three on the right. Red lines connect the fractions as follows: a line from  $\frac{2}{5}$  to  $\frac{2}{3}$ , a line from  $\frac{1}{11}$  to  $\frac{6}{15}$ , and a line from  $\frac{6}{9}$  to  $\frac{9}{99}$ . These connections indicate that the fractions are not equivalent.

$\frac{2}{5}$	$\frac{9}{99}$
$\frac{1}{11}$	$\frac{2}{3}$
$\frac{6}{9}$	$\frac{6}{15}$

Now try these: This is submitted work so please send me a picture of your workings.

### Equivalent Fractions

Examples:

1.

$$\frac{4}{6} = \frac{8}{12}$$

The diagram shows a multiplication process: an arrow from 4 to 8 is labeled  $\times 2$ , and an arrow from 6 to 12 is labeled  $\times 2$ . The number 12 in the denominator is highlighted in green.

2.

$$\frac{2}{3} = \frac{10}{15}$$

The diagram shows a division process: an arrow from 10 to 2 is labeled  $\div 5$ , and an arrow from 15 to 3 is labeled  $\div 5$ . The number 3 in the denominator is highlighted in green.

Find the missing values in the following equivalent fractions.

Show your working as demonstrated above.

$$\frac{1}{6} = \frac{\text{■}}{18}$$

$$\frac{2}{4} = \frac{\text{■}}{16}$$

$$\frac{4}{\text{■}} = \frac{12}{15}$$

$$\frac{2}{3} = \frac{6}{\text{■}}$$