Equivalent Fractions

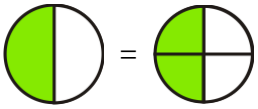
$1\frac{1}{5}$

$1\frac{2}{10}$

The two fraction strips show an equal amount. So we can write an equal sign between the two fractions:

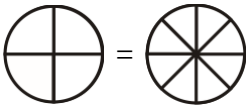
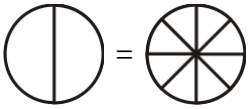
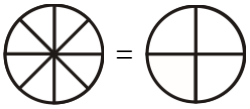
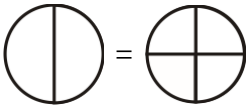
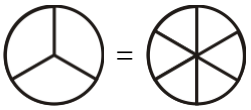
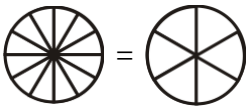
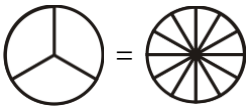
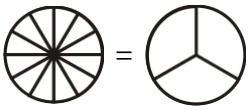
$$1\frac{1}{5} = 1\frac{2}{10}$$

If you eat half of a pizza, or 2/4 of a pizza, you have eaten the same amount.

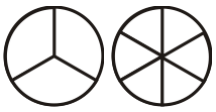


$$\frac{1}{2} = \frac{2}{4}$$

1. Shade the pie parts that the first fraction shows. Shade the same *amount of pie* in the second picture. Write the second fraction.

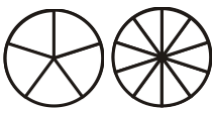
 **a.** $\frac{1}{4} =$	 **b.** $\frac{1}{2} =$	 **c.** $\frac{6}{8} =$	 **d.** $\frac{1}{2} =$
 **e.** $\frac{2}{3} =$	 **f.** $\frac{10}{12} =$	 **g.** $\frac{1}{3} =$	 **h.** $\frac{8}{12} =$

2. Write the fractions that have thirds with sixths instead. You can imagine shading parts in the pictures.



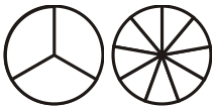
a. $\frac{1}{3} =$ **b.** $\frac{2}{3} =$ **c.** $2\frac{1}{3} =$ **d.** $\frac{4}{3} =$ **e.** $1\frac{2}{3} =$

3. Write the fractions that have fifths with tenths instead.



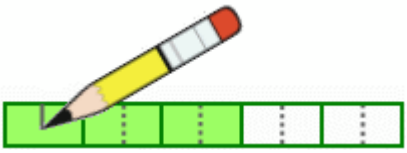
a. $\frac{1}{5} =$ **c.** $\frac{4}{5} =$ **c.** $1\frac{3}{5} =$ **d.** $\frac{2}{5} =$ **e.** $5\frac{1}{5} =$

4. Write the fractions that have thirds with ninths instead.



a. $\frac{1}{3} =$ **c.** $\frac{2}{3} =$ **c.** $1\frac{1}{3} =$ **d.** $5\frac{2}{3} =$ **e.** $\frac{5}{3} =$

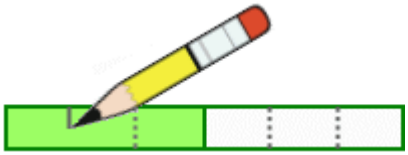
The fraction strip on the right illustrates $\frac{3}{5}$. If you split each piece (both the colored and white pieces) into *two* new pieces, what fraction do you get?



You get $\frac{6}{10}$ – six colored pieces, and ten pieces total.

You have *two* times as many colored pieces, and *two* times as many total pieces as before.

The fraction strip illustrates $\frac{1}{2}$. If you split each piece (both the colored and the white piece) into *three* new pieces, what fraction do you get?



You get $\frac{3}{6}$ – three colored pieces, and six pieces total.

You have *three* times as many colored pieces, and *three* times as many total pieces as before.

5. Split both the colored and white pieces as instructed. Write the fraction as it was and the fraction after you change it.

a. Split all the pieces into two new ones.  $\frac{1}{2} = \frac{\quad}{\quad}$	**b.** Split all the pieces into four new ones.  $\frac{1}{2} = \frac{\quad}{\quad}$	**c.** Split all the pieces into two new ones.  $\frac{1}{3} = \frac{\quad}{\quad}$
d. Split all the pieces into three new ones.  $\frac{1}{3} = \frac{\quad}{\quad}$	**e.** Split all the pieces into three new ones.  $\frac{1}{4} = \frac{\quad}{\quad}$	**f.** Split all the pieces into two new ones.  $\frac{3}{4} = \frac{\quad}{\quad}$
g. Split all the pieces into two new ones.  $\frac{4}{5} = \frac{\quad}{\quad}$	**h.** Split all the pieces into two new ones.  $\frac{5}{6} = \frac{\quad}{\quad}$	**i.** Split all the pieces into three new ones.  $\frac{2}{5} = \frac{\quad}{\quad}$

6. Split the pieces to show the fraction that is given.

 **a.** This is $\frac{3}{4}$. Make it $\frac{9}{12}$.	 **b.** This is $\frac{1}{3}$. Make it $\frac{4}{12}$.	 **c.** This is $\frac{1}{2}$. Make it $\frac{5}{10}$.
 **d.** This is $\frac{1}{4}$. Make it $\frac{4}{16}$.	 **e.** This is $\frac{2}{3}$. Make it $\frac{10}{15}$.	 **f.** This is $\frac{2}{3}$. Make it $\frac{8}{12}$.

7. Now write the equivalent fraction yourself. You can imagine a picture in your mind.

a. Split all the pieces into two new ones. $\frac{1}{2} = \frac{\quad}{\quad}$	**b.** Split all the pieces into three new ones. $\frac{1}{2} = \frac{\quad}{\quad}$	**c.** Split all the pieces into four new ones. $\frac{1}{2} = \frac{\quad}{\quad}$	**d.** Split all the pieces into five new ones. $\frac{1}{2} = \frac{\quad}{\quad}$
e. Split all the pieces into two new ones. $\frac{1}{3} = \frac{\quad}{\quad}$	**f.** Split all the pieces into two new ones. $\frac{2}{3} = \frac{\quad}{\quad}$	**g.** Split all the pieces into two new ones. $\frac{1}{4} = \frac{\quad}{\quad}$	**h.** Split all the pieces into two new ones. $\frac{3}{4} = \frac{\quad}{\quad}$
i. Split all the pieces into three new ones. $\frac{1}{3} = \frac{\quad}{\quad}$	**j.** Split all the pieces into three new ones. $\frac{2}{3} = \frac{\quad}{\quad}$	**k.** Split all the pieces into three new ones. $\frac{1}{4} = \frac{\quad}{\quad}$	**l.** Split all the pieces into three new ones. $\frac{3}{4} = \frac{\quad}{\quad}$

8. Connect the equivalent fractions with a line.

a.	$\frac{2}{3}$	$\frac{1}{3}$
	$\frac{1}{4}$	$\frac{1}{2}$
	$\frac{5}{10}$	$\frac{2}{8}$
	$\frac{2}{6}$	$\frac{6}{9}$

b.	$\frac{1}{2}$	$\frac{2}{10}$
	$\frac{3}{4}$	$\frac{1}{3}$
	$\frac{1}{5}$	$\frac{6}{12}$
	$\frac{4}{12}$	$\frac{9}{12}$

c.	$\frac{3}{6}$	$\frac{3}{12}$
	$\frac{1}{4}$	$\frac{1}{2}$
	$\frac{1}{3}$	$\frac{8}{12}$
	$\frac{2}{3}$	$\frac{4}{12}$