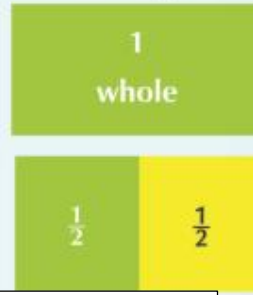
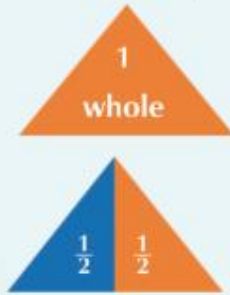


Fractions



Fractions

When a whole is divided into two equal parts it is shared in half ($\frac{1}{2}$).



MUST BE equal parts. (the same size)

B We use fractions every day to share things equally. Write five more examples.

There are eight in Tom's family. His mum cut the pizza into eight equal pieces.

Sarah's mum cut her birthday cake into four equal pieces! Yummy!

1. <i>Cut a sandwich in half for lunch.</i>	2.
3.	4.
5.	6.

C Use the fraction wall to answer the questions.



- How many halves are in 1 unit?
- How many quarters are in 1 unit?
- How many quarters are in one half?



Here we have one unit. Can you divide it into halves first? Now divide it into quarters. How do we write one half, one quarter?

If you have completed this work well done!!!!

Fractions

If you have an orange/apple at home divide it into 4 quarters. Eat 2 pieces. How many quarters are left?

Do you notice anything about what is left?

Fractions $\frac{1}{4}$
 This block has been divided into four quarters.

$\frac{4}{4} =$ four quarters or one whole

$\frac{1}{4} =$ one quarter

$\frac{2}{4} =$ two quarters or $\frac{1}{2}$

$\frac{3}{4} =$ three quarters

B Which shapes have been divided into **quarters**? Tick the boxes.

1. 2. 3. 4. 5.

6. 7. 8. 9. 10.

Challenge

If Mrs. O Sullivan ordered 2 pizza's from domino's for her party and if everybody had $\frac{1}{4}$ except for Mr. O' Keeffe who was greedy and ate 2 quarters how many people were at the party?

RUDE
strategy

Read the problem

Underline the important info.

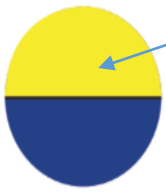
Draw it out.

Estimate an answer

If you have completed this work well done!!!!

Fractions

Revision: So when one whole unit is broken up into 2 equal parts we call them halves.



$\frac{1}{2}$

$\frac{1}{2}$ means 1 part out of 2 equal parts.

$\frac{2}{2}$ means 2 parts out of 2 equal parts which is the same as one whole

When one whole unit is broken up into 4 equal parts we call them quarters.

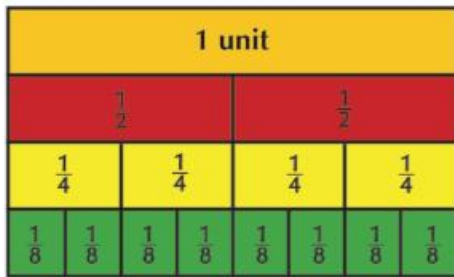


$\frac{1}{4}$

$\frac{1}{4}$ means 1 part out of 4 equal parts.

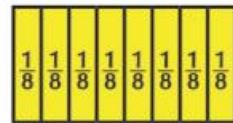
$\frac{4}{4}$ means 4 parts out of 4 equal parts which is the same as one whole.

Introducing $\frac{1}{8}$'s

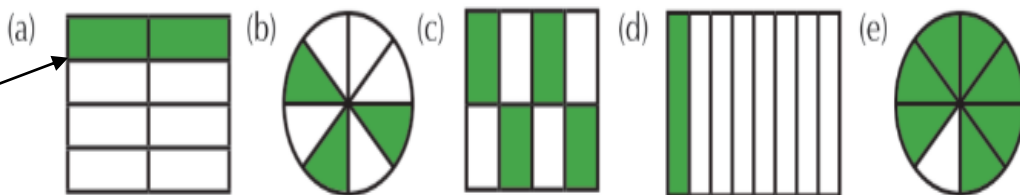


Fractions $\frac{1}{8}$

When we divide a shape into eight equal pieces each part is called an eighth or $\frac{1}{8}$.

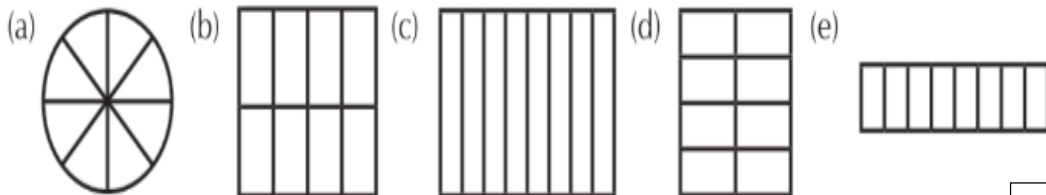


A 1. What fraction is shaded?



Example: 2 shaded parts out of 8 equal parts is $\frac{2}{8}$

2. Colour the fraction shown.



$\frac{6}{8}$

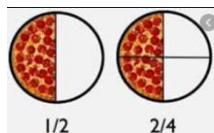
$\frac{2}{8}$

$\frac{4}{8}$ or

$\frac{2}{8}$

$\frac{2}{8}$

a) $\frac{1}{4} = \frac{2}{8}$



The picture shows us $\frac{1}{2}$ of the pizza is the same as $\frac{2}{4}$

***Remember** when the number below the line (denominator) gets bigger, the size of the part gets smaller.

Eg. $\frac{1}{8}$ is smaller than $\frac{1}{4}$

If you have completed this work well done!!!!

Fractions

3. Use the fraction wall to answer the following questions.

(a) $\frac{\square}{4} = \frac{1}{2}$

(b) $\frac{\square}{8} = \frac{1}{4}$

(c) $\frac{\square}{4} = 1$ unit

(d) $\frac{3}{4} = \frac{\square}{8}$

(e) $\frac{4}{4} = \frac{\square}{8}$

(f) $\frac{\square}{8} = \frac{1}{2}$

(g) $\frac{\square}{2} = 1$ unit

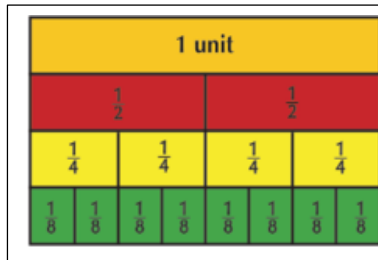
(h) $\frac{2}{4} = \frac{\square}{8}$

(i) $\frac{\square}{8} = 1$ unit

(j) $\frac{2}{8} = \frac{1}{\square}$

(k) $\frac{3}{4} = \frac{\square}{8}$

(l) $\frac{2}{2} = \frac{\square}{4}$



4. Who ate the most?

(a)	Jenny ate $\frac{1}{8}$	
	Luke ate $\frac{2}{4}$	
	Paul ate $\frac{3}{8}$	

(b)	Tony ate $\frac{7}{8}$	
	Sarah ate $\frac{1}{2}$	
	Lucy ate $\frac{3}{4}$	

(c)	George ate $\frac{5}{8}$	
	Alan ate $\frac{3}{4}$	
	Joan ate $\frac{2}{8}$	

(d)	Maria ate $\frac{2}{4}$	
	Sinead ate $\frac{8}{8}$	
	Ciara ate $\frac{4}{8}$	

Units and fractions

1 unit + $\frac{1}{4}$ or $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$ is written as $1\frac{1}{4}$

B 1. What fraction is shown in each picture?

(a)

(b)

(c)

(d)

2. Place these fractions in order, starting with the smallest.

(a) $1\frac{1}{2}$, $\frac{2}{4}$, $2\frac{1}{8}$, 3, $2\frac{7}{8}$, $1\frac{3}{4}$, $\frac{1}{8}$, $1\frac{5}{8}$, $\frac{3}{8}$

(b) $2\frac{2}{4}$, 1, $3\frac{5}{8}$, $1\frac{6}{8}$, $\frac{2}{8}$, $2\frac{1}{4}$, $3\frac{2}{4}$

We call these **mixed numbers**. A mixed number is a whole number (one full unit) and another fraction.

Word Problems

- If Mr. Mcgovern ate $\frac{1}{2}$ a pizza, what fraction would be left?
- If Mr. O' Connor ate $\frac{2}{4}$ of his sandwich what fraction would he have left.
- Ms. O'keeffe ate $\frac{1}{2}$ of the chocolate bar and her dad ate $\frac{1}{4}$ of the bar. How much was left for Mr. O' Keeffe?

If you have completed this work well done!!!!

Fractions

Your aim: To know less than $\frac{1}{2}$, Equal to $\frac{1}{2}$, Greater than a $\frac{1}{2}$.

4 Write in the letter into the correct box. The first one is done for you.

Less than $\frac{1}{2}$	Equal to $\frac{1}{2}$	Greater than $\frac{1}{2}$
<div style="border: 1px solid black; width: 80px; height: 20px; margin: 0 auto; text-align: center;">L</div>		

B Halves, quarters and eighths.

Which is greater?

- | | |
|-----------------------------------|-----------------------------------|
| 1. 1 or $\frac{1}{2}$ | 2. $\frac{1}{4}$ or $\frac{1}{8}$ |
| 3. $\frac{1}{2}$ or $\frac{3}{4}$ | 4. $\frac{5}{8}$ or $\frac{1}{2}$ |
| 5. $\frac{7}{8}$ or $\frac{3}{4}$ | 6. $\frac{1}{4}$ or $\frac{3}{8}$ |



If stuck don't forget to use your fraction wall.

3. Write a fraction that has the same value as:

- (a) $\frac{1}{2}$ (b) $\frac{1}{4}$ (c) $\frac{3}{4}$ (d) 1 unit (e) $\frac{2}{4}$ (f) $\frac{6}{8}$

If you have completed this work well done!!!!

Fractions

Introducing $\frac{1}{5}$'s and $\frac{1}{10}$'s

A Halves, fifths, tenths.

1. Which is greater?

(a) $\frac{1}{5}$ or $\frac{1}{10}$

(b) $\frac{4}{5}$ or $\frac{1}{2}$

(c) $\frac{7}{10}$ or $\frac{3}{5}$

(d) $\frac{1}{2}$ or $\frac{6}{10}$

(e) 1 unit or $\frac{9}{10}$

(f) $\frac{4}{5}$ or $\frac{8}{10}$

2. Write a fraction that has the same value as:

(a) $\frac{1}{2}$

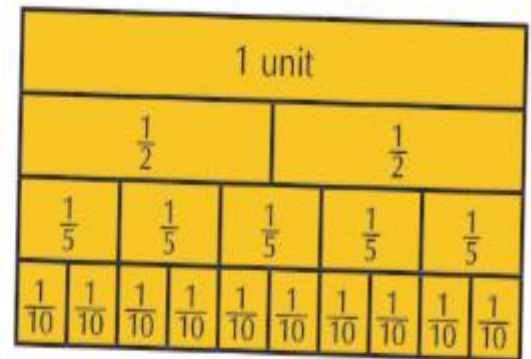
(b) $\frac{3}{5}$

(c) $\frac{4}{10}$

(d) $\frac{1}{5}$

(e) $\frac{5}{10}$

(f) $\frac{6}{10}$



1. Mr. McGowan invited 4 teachers over to his house for tea. How many equal parts should the cake be cut into to share it fairly? (Don't forget Mr. McGowan- he loves cake)
2. If Mr. McGowan intended to give everybody at the party 2 slices how many equal parts should he cut it into?
3. If you were one of Mr. McGowan's guests and you loved cake which would you prefer? 1 piece of cake when the cake is cut into 5 equal pieces or 2 pieces of cake when the cake is cut into 10 equal pieces? (don't forget to use your fraction wall)
4. 2 cakes were baked for a party for 20 people. How many equal parts should the cake be cut into.

If you have completed this work well done!!!!

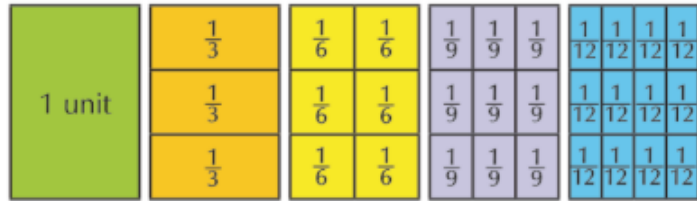
Fractions

Introducing $\frac{1}{3}$'s, $\frac{1}{6}$'s, $\frac{1}{9}$'s, $\frac{1}{12}$'s (thirds, sixths, ninths, twelfths)

A Thirds, sixths, ninths, twelfths.

1. Which is greater?

- (a) $\frac{2}{3}$ or $\frac{4}{9}$ (b) $\frac{1}{6}$ or $\frac{1}{3}$
 (c) $\frac{11}{12}$ or 1 unit (d) $\frac{7}{9}$ or $\frac{4}{6}$
 (e) $\frac{3}{6}$ or $\frac{5}{12}$ (f) $\frac{7}{9}$ or $\frac{2}{3}$



3. Write a fraction that has the same value as:

- (a) $\frac{2}{3}$ (b) $\frac{3}{6}$ (c) $\frac{3}{9}$ (d) $\frac{8}{12}$ (e) 1 unit (f) $\frac{6}{9}$

Make your own fraction wall!!!

Fraction Wall: 1st row thirds, 2nd row sixths, 3rd row ninths, 4th row twelfths.

C Put these fractions in order. Start with the smallest.

1. $\frac{2}{3}$, 1, $\frac{1}{3}$ 2. $\frac{5}{6}$, $\frac{1}{6}$, $\frac{3}{6}$ 3. $\frac{7}{12}$, $\frac{11}{12}$, $\frac{8}{12}$
 4. $\frac{1}{3}$, $\frac{1}{6}$, $\frac{5}{6}$ 5. $\frac{2}{9}$, $\frac{2}{3}$, $\frac{5}{9}$ 6. $\frac{11}{12}$, $\frac{7}{12}$, $\frac{3}{6}$

If you have completed this work well done!!!!

Fractions

Your aim:

- to know the numerator and the denominator
- to investigate the relationship between fractions using a fraction wall.

4 Let's investigate: fraction wall.

1. Find a fraction that has the same value as:

- (a) $\frac{1}{3}$ (b) $\frac{1}{2}$ (c) $\frac{1}{4}$ (d) $\frac{1}{5}$
 (e) $\frac{2}{3}$ (f) $\frac{3}{4}$ (g) $\frac{2}{5}$ (h) $\frac{5}{6}$

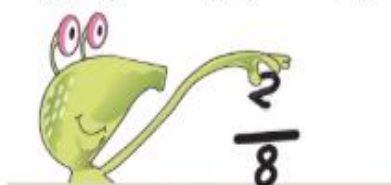


Fractions

The **numerator** is the number on the top.
 The **denominator** is the number on the bottom.

2. Find a fraction with a numerator of 1 that is smaller than:

- (a) $\frac{1}{6}$ (b) $\frac{1}{10}$ (c) $\frac{1}{8}$ (d) $\frac{1}{5}$

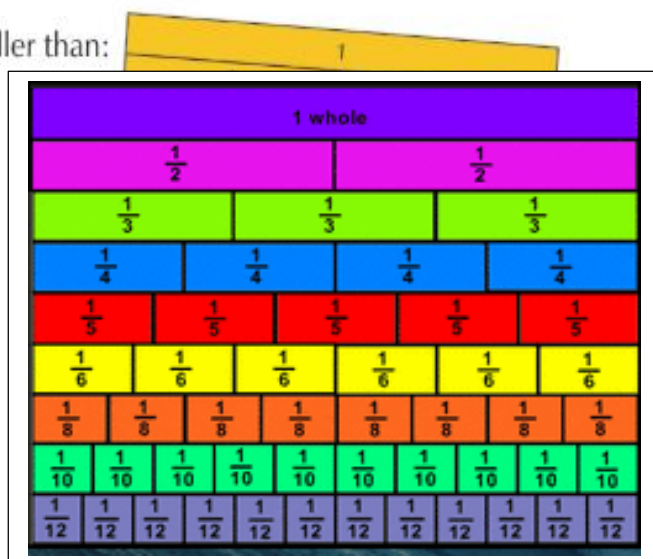


3. Find two fractions with a denominator of 12 that are smaller than $\frac{7}{12}$.

4. Find two fractions with a denominator of 5 that are greater than $\frac{1}{5}$.

5. Fill in the blanks.

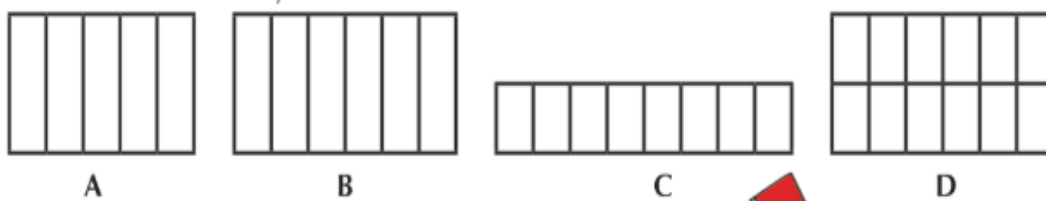
- (a) $\frac{5}{6} = \frac{\square}{12}$ (b) $\frac{6}{8} = \frac{\square}{4}$ (c) $\frac{3}{5} = \frac{\square}{10}$ (d) $\frac{2}{3} = \frac{\square}{9}$ (e) $\frac{1}{2} = \frac{\square}{10}$
 (f) $\frac{1}{4} = \frac{3}{\square}$ (g) $\frac{3}{5} = \frac{6}{\square}$ (h) $\frac{8}{12} = \frac{4}{\square}$ (i) $\frac{4}{6} = \frac{2}{\square}$ (j) $\frac{6}{8} = \frac{3}{\square}$



3 All but one.

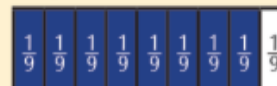
1. Use the five rectangles below and colour:

- A All but one fifth blue
 B All but one sixth green
 C All but one eighth red
 D All but one twelfth yellow



Example

All but one ninth of this shape is blue.



If you have completed this work well done!!!!