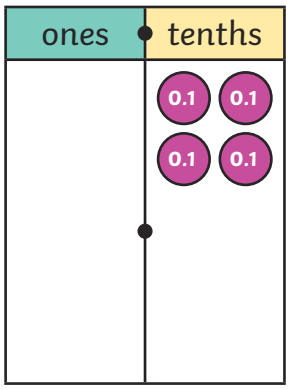
# Equivalent Fractions and Decimals

To find equivalent fractions and decimals.

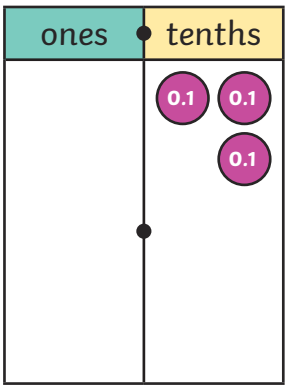
1) Write a fraction and a decimal to match the number represented on the place value chart.

a)

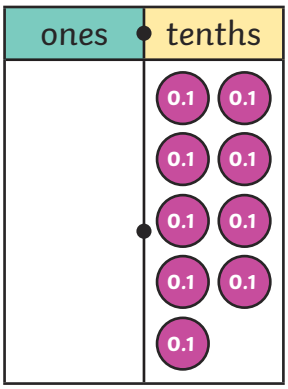



$\frac{4}{10} = 0.4$

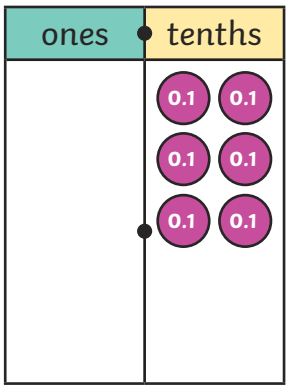
b)



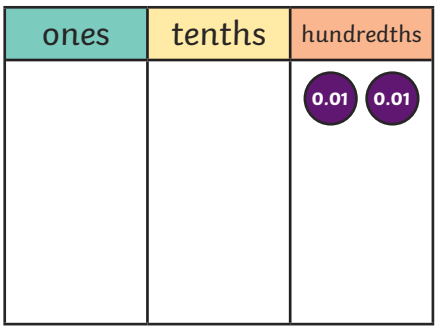

c)




d)

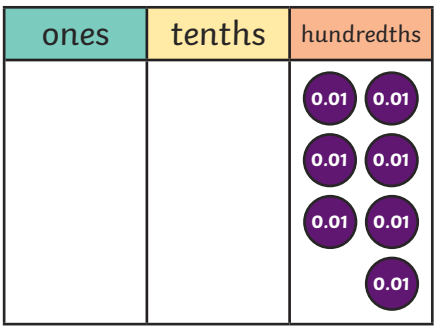



e)

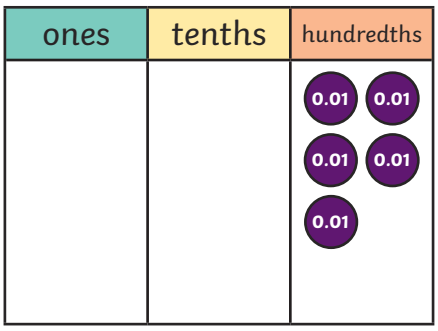



$\frac{2}{100} = 0.02$

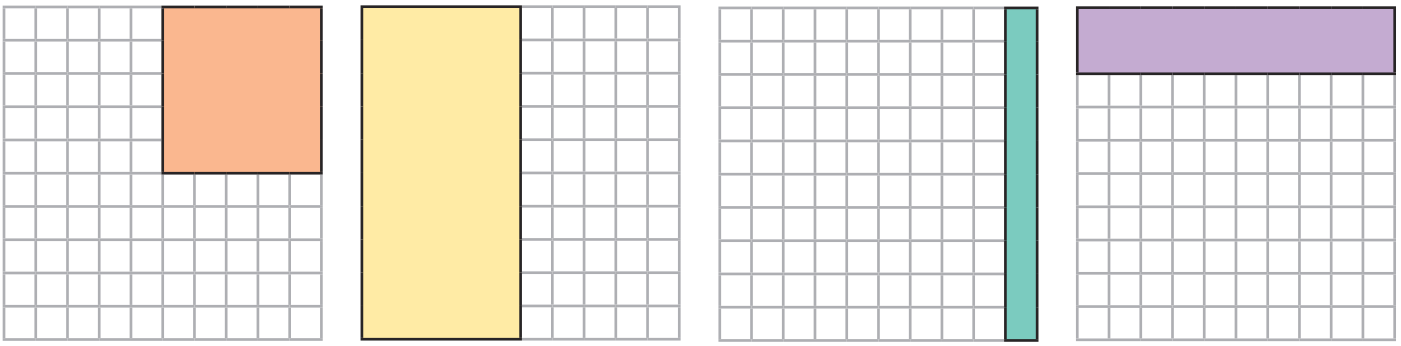
f)




g)

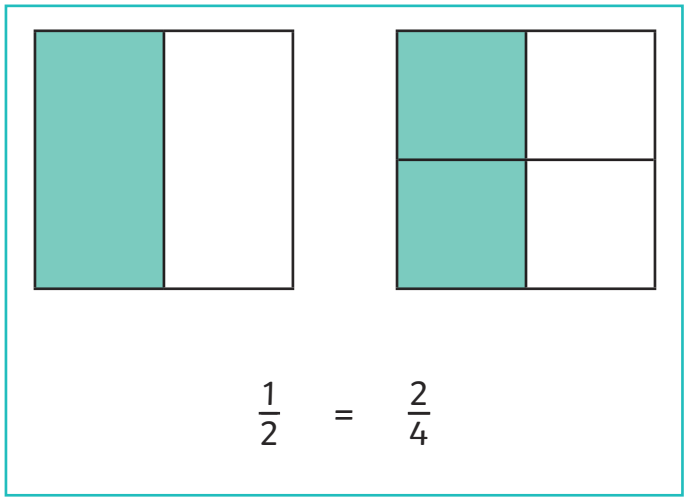


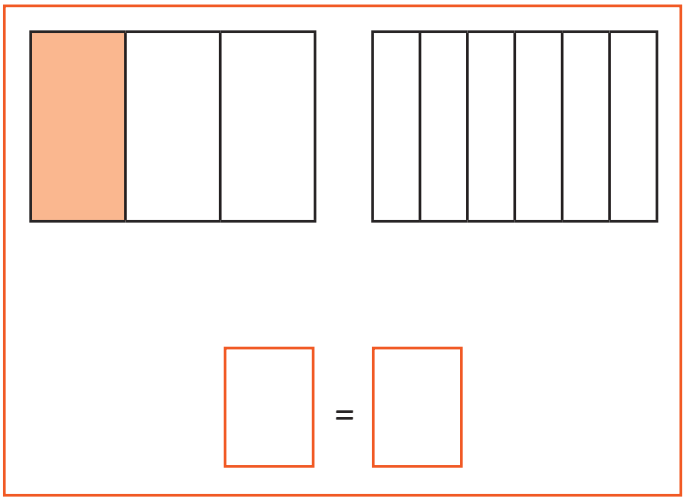

2) Draw lines to match the fractions to the images.

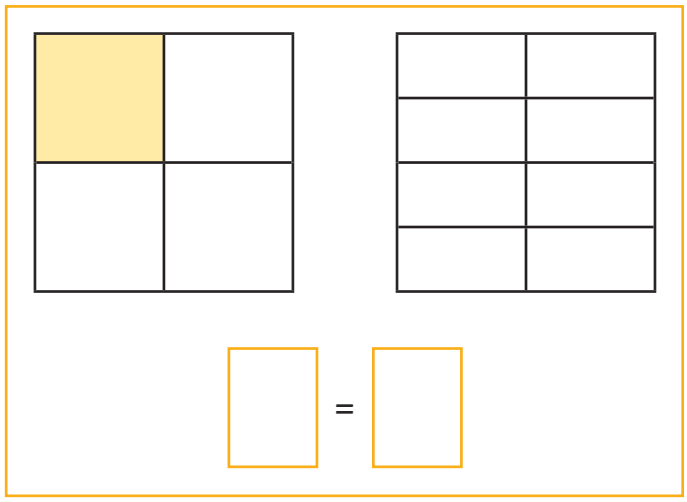


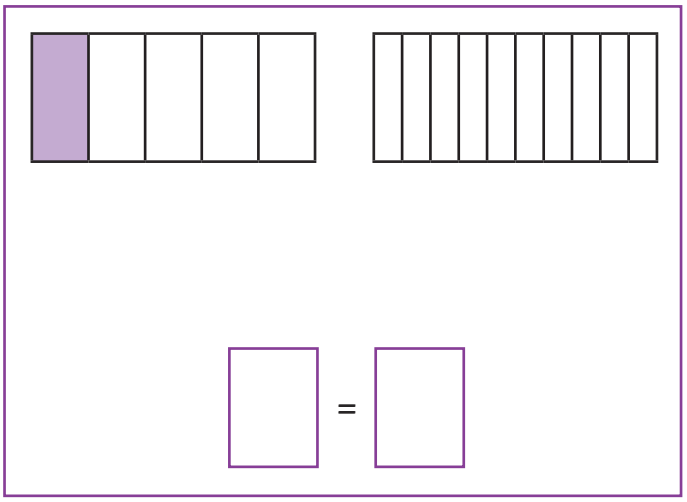
$\frac{1}{5}$ $\frac{1}{4}$ $\frac{1}{2}$ $\frac{1}{10}$

3) Shade the second shape so that the pairs of shapes show equivalent fractions.
Write the fractions to match each representation.



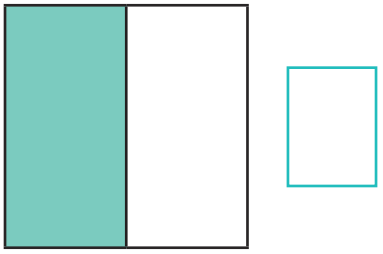
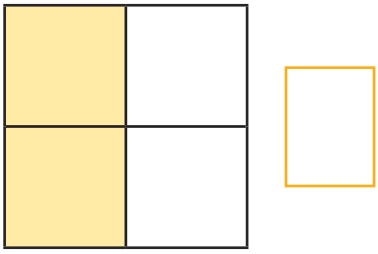
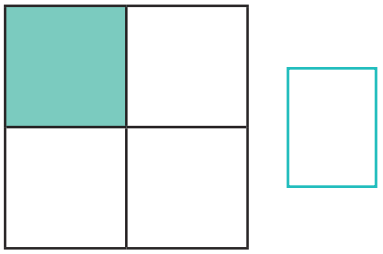
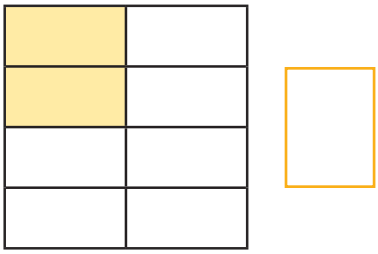
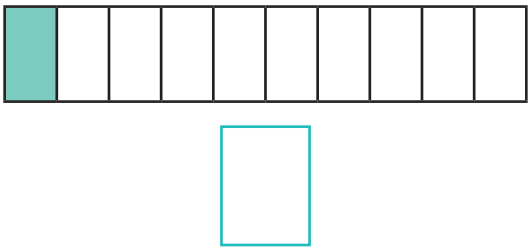
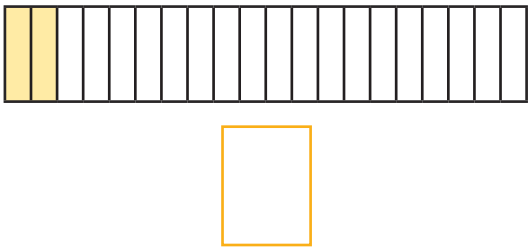
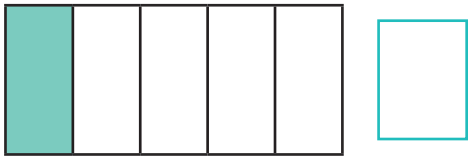
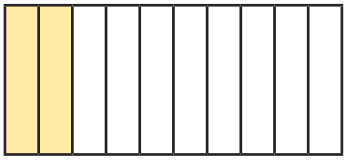

4) Draw lines to match the fractions to the decimal numbers.

| | |
|---|---|
| $\frac{1}{5}$ | 0.1 |
| $\frac{1}{4}$ | 0.2 |
| $\frac{1}{2}$ | 0.5 |
| $\frac{1}{10}$ | 0.25 |

# Equivalent Fractions and Decimals

To find equivalent fractions and decimals.

1) a) Complete the table below to show equivalent fractions and decimals.

| Fraction | Fraction | Decimal |
|---|---|---|
|  |  | |
|  |  | |
|  |  | |
|  |  | |

b) What do you notice about the pairs of equivalent fractions?

2) Find the equivalent fractions.

Remember to multiply the numerator and the denominator by the same number.

$\frac{1}{2} \overset{\times 4}{=} \frac{4}{8}$

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

b) $\frac{3}{4} = \frac{12}{\square}$

c) $\frac{7}{\square} = \frac{14}{16}$

d) $\frac{\square}{3} = \frac{8}{12}$

e) $\frac{1}{8} = \frac{2}{\square}$

f) $\frac{2}{9} = \frac{\square}{27}$

3) Convert the improper fractions to mixed numbers and find the equivalent decimal number.

Remember to divide the numerator by the denominator when converting improper fractions.

$\frac{7}{2} = 3\frac{1}{2} = 3.5$

a) $\frac{9}{4} = \square = \square$

b) $\frac{12}{10} = \square = \square$

c) $\frac{13}{2} = \square = \square$

d) $\frac{19}{4} = \square = \square$

# Equivalent Fractions and Decimals

To find equivalent fractions and decimals.

1) Find the equivalent fractions.

a) $\frac{3}{5} = \frac{\square}{15}$

b) $\frac{3}{4} = \frac{18}{\square}$

c) $\frac{7}{\square} = \frac{14}{24}$

d) $\frac{\square}{3} = \frac{14}{21}$

e) $\frac{1}{8} = \frac{9}{\square}$

f) $\frac{2}{9} = \frac{\square}{36}$

2) Convert the improper fractions to mixed numbers and find the equivalent decimal number.

a) $\frac{11}{5} = \square = \square$

b) $\frac{17}{10} = \square = \square$

c) $\frac{7}{2} = \square = \square$

d) $\frac{18}{4} = \square = \square$

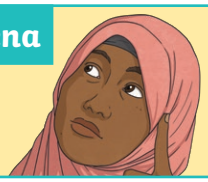
c) $\frac{19}{2} = \square = \square$

d) $\frac{28}{5} = \square = \square$

3) Find three fractions equivalent to 0.5. Draw images to show your thinking.

4)

**Hena**



If a fraction has an odd numerator and denominator, its equivalent fractions will also have an odd numerator and denominator.

**For example:**

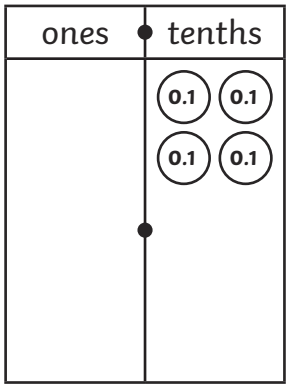
$$\frac{7}{2} = \frac{3}{21}$$

Is Hena's statement always, sometimes or never true? Explain how you know.

# Answers

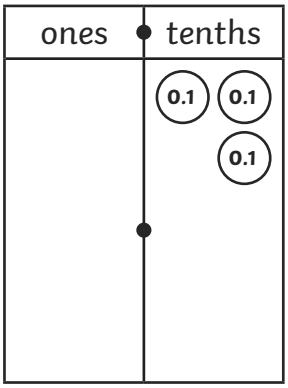
1) Write a fraction and a decimal to match the number represented on the place value chart.

a)



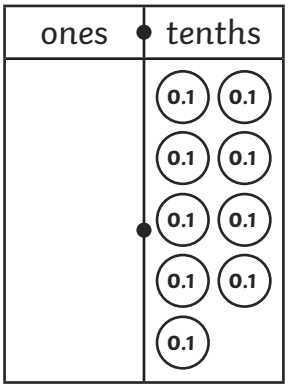

$\frac{4}{10} = 0.4$

b)



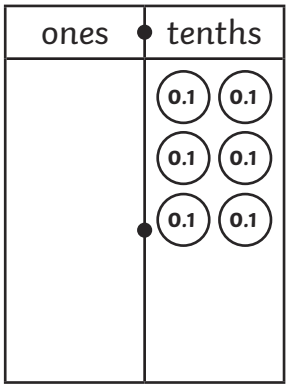

**$\frac{3}{10} = 0.3$**

c)



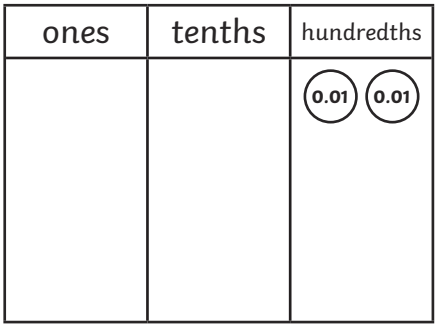

**$\frac{9}{10} = 0.9$**

d)



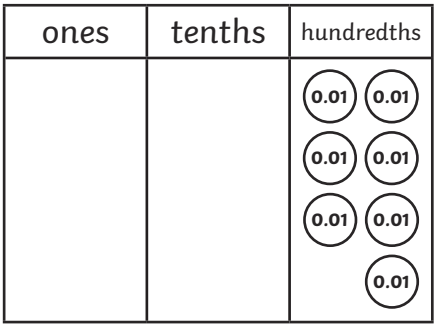

**$\frac{6}{10} = 0.6$**

e)



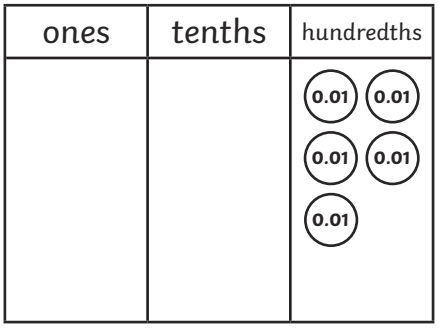

$\frac{2}{100} = 0.02$

f)



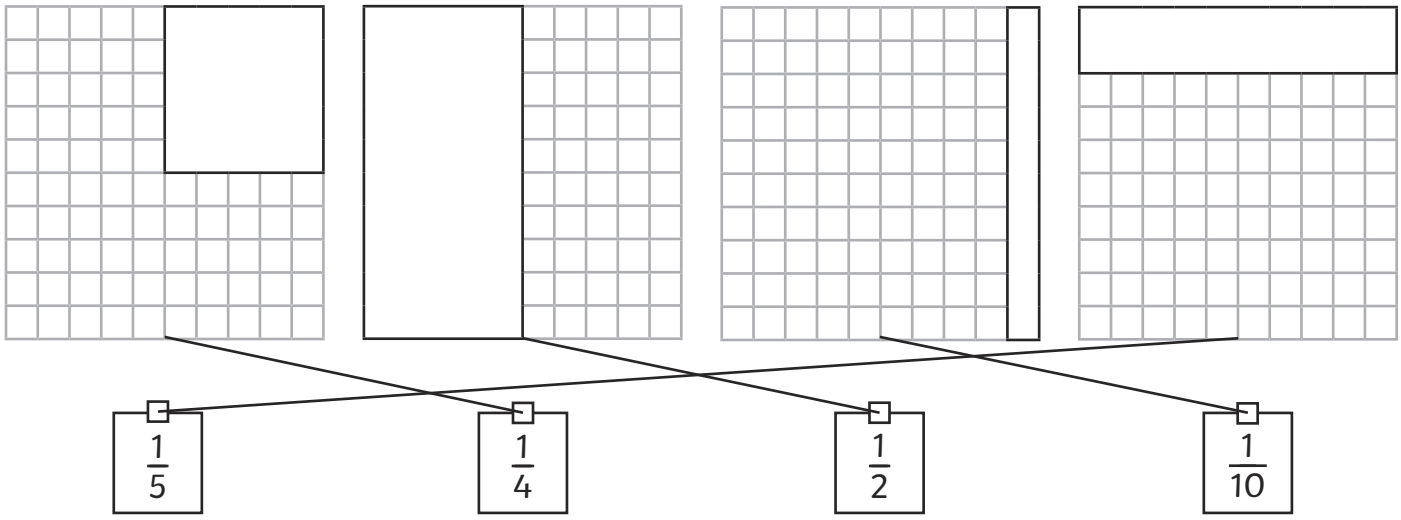

**$\frac{7}{100} = 0.07$**

g)

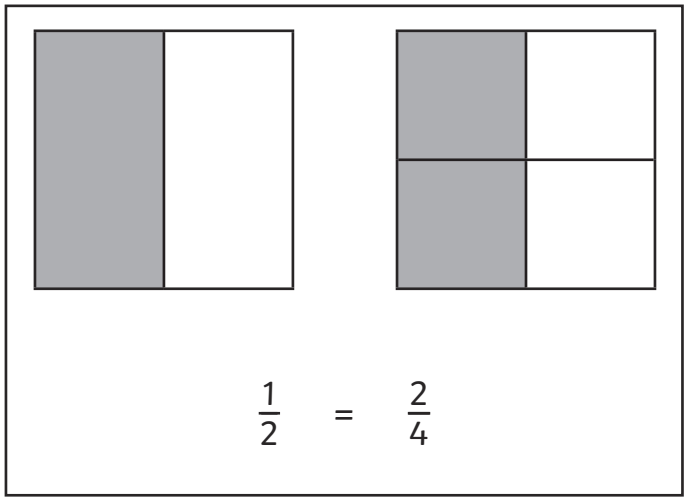



**$\frac{5}{100} = 0.05$**

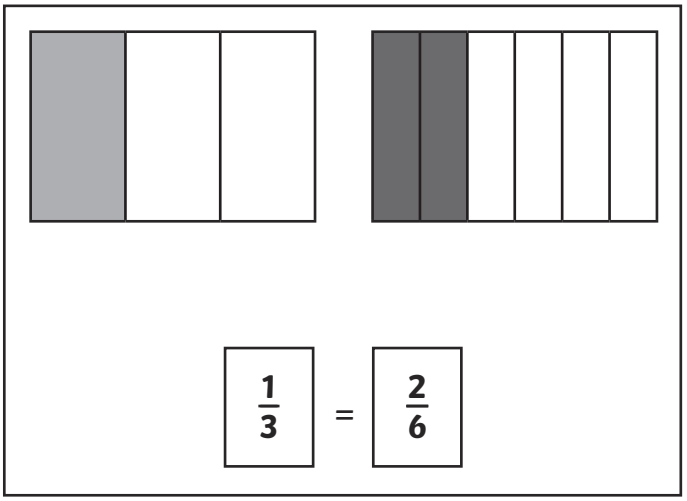
2) Draw lines to match the fractions to the images.



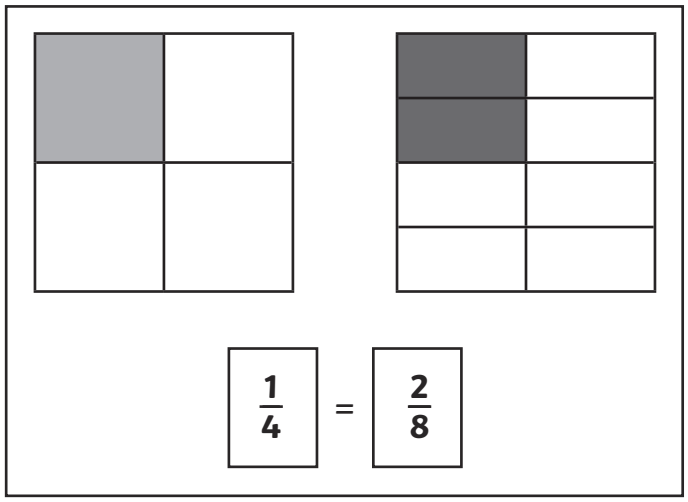
3) Shade the second shape so that the pairs of shapes show equivalent fractions.
Write the fractions to match each representation.



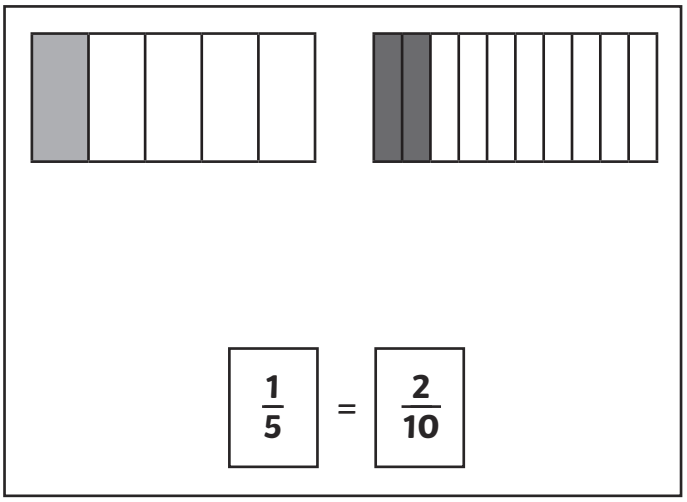
$\frac{1}{2} = \frac{2}{4}$



$\frac{1}{3} = \frac{2}{6}$

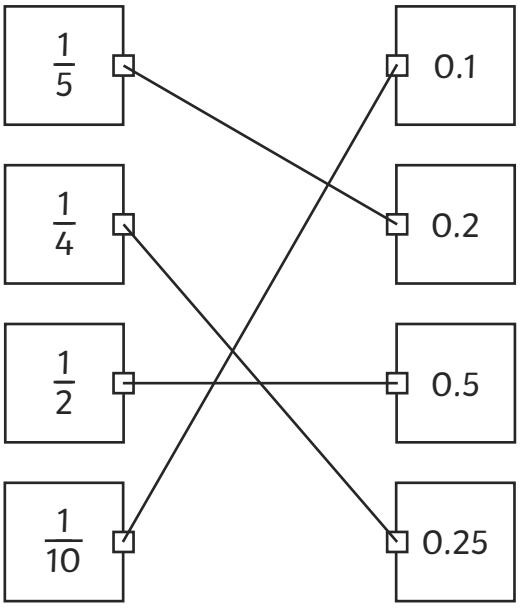


$\frac{1}{4} = \frac{2}{8}$



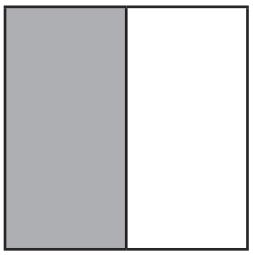
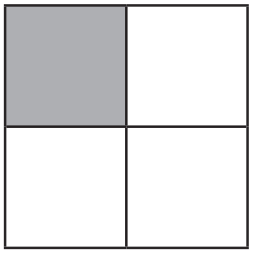
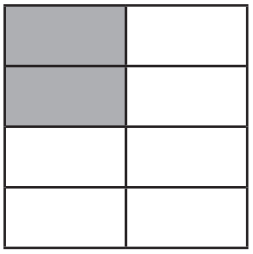
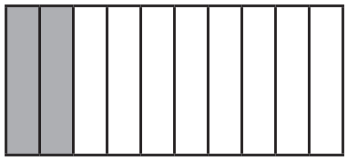
$\frac{1}{5} = \frac{2}{10}$

4) Draw lines to match the fractions to the decimal numbers.



# Answers

1) a) Complete the table below to show equivalent fractions and decimals.

| Fraction | Fraction | Decimal |
|---|---|---|
|  $\frac{1}{2}$ |  $\frac{2}{4}$ | 0.5 |
|  $\frac{1}{4}$ |  $\frac{2}{8}$ | 0.25 |
|  $\frac{1}{10}$ |  $\frac{2}{20}$ | 0.1 |
|  $\frac{1}{5}$ |  $\frac{2}{10}$ | 0.2 |

b) What do you notice about the pairs of equivalent fractions?

**Children may respond: When you double the numerator and denominator of the fraction, you can find the equivalent fractions.**

**Or**

**When you multiply the numerator and denominator by the same number you make an equivalent fraction.**

2) Find the equivalent fractions.

Remember to multiply the numerator and the denominator by the same number.

$\frac{1}{2} \overset{\times 4}{=} \frac{4}{8}$ (× 4)

a) $\frac{3}{5} = \frac{\boxed{6}}{10}$

b) $\frac{3}{4} = \frac{12}{\boxed{16}}$

c) $\frac{7}{\boxed{8}} = \frac{14}{16}$

d) $\frac{\boxed{2}}{3} = \frac{8}{12}$

e) $\frac{1}{8} = \frac{2}{\boxed{16}}$

f) $\frac{2}{9} = \frac{\boxed{6}}{27}$

3) Convert the improper fractions to mixed numbers and find the equivalent decimal number.

Remember to divide the numerator by the denominator when converting improper fractions.

$\frac{7}{2} = 3\frac{1}{2} = 3.5$

a) $\frac{9}{4} = \boxed{\mathbf{2\frac{1}{4}}} = \boxed{\mathbf{2.25}}$

b) $\frac{12}{10} = \boxed{\mathbf{1\frac{2}{10}}} = \boxed{\mathbf{1.2}}$

c) $\frac{13}{2} = \boxed{\mathbf{6\frac{1}{2}}} = \boxed{\mathbf{6.5}}$

d) $\frac{19}{4} = \boxed{\mathbf{4\frac{3}{4}}} = \boxed{\mathbf{4.75}}$

# Answers

1) Find the equivalent fractions.

a) $\frac{3}{5} = \frac{\boxed{9}}{15}$

b) $\frac{3}{4} = \frac{18}{\boxed{24}}$

c) $\frac{7}{\boxed{12}} = \frac{14}{24}$

d) $\frac{\boxed{2}}{3} = \frac{14}{21}$

e) $\frac{1}{8} = \frac{9}{\boxed{72}}$

f) $\frac{2}{9} = \frac{\boxed{8}}{36}$

2) Convert the improper fractions to mixed numbers and find the equivalent decimal number.

a) $\frac{11}{5} = \boxed{2\frac{1}{5}} = \boxed{2.2}$

b) $\frac{17}{10} = \boxed{1\frac{7}{10}} = \boxed{1.7}$

c) $\frac{7}{2} = \boxed{3\frac{1}{2}} = \boxed{3.5}$

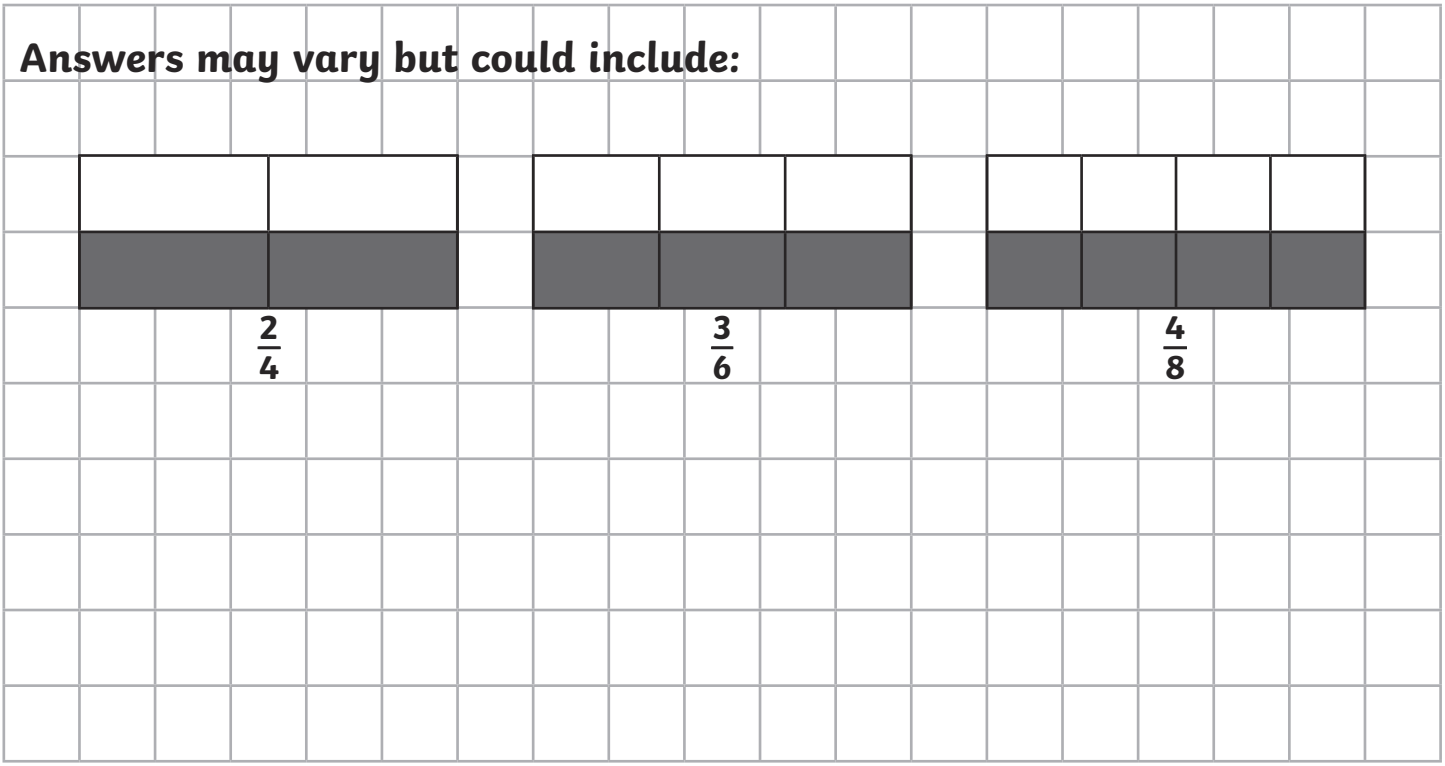
d) $\frac{18}{4} = \boxed{4\frac{2}{4}} = \boxed{4.5}$

c) $\frac{19}{2} = \boxed{9\frac{1}{2}} = \boxed{9.5}$

d) $\frac{28}{5} = \boxed{5\frac{3}{5}} = \boxed{5.6}$

3) Find three fractions equivalent to 0.5. Draw images to show your thinking.

**Answers may vary but could include:**




4)

| Hena  | If a fraction has an odd numerator and denominator, its equivalent fractions will also have an odd numerator and denominator. |
|---|---|

| For example: |
|---|
| $\frac{7}{2} = \frac{3}{21}$ |

Is Hena's statement always, sometimes or never true? Explain how you know.

**Hena's statement is sometimes true. When you multiply the numerator and denominator of a unit fraction by an odd number to find an equivalent fraction, e.g. $\frac{1}{3}$ by 3, 5 or 7, all the numbers in the equivalent fraction will be odd, e.g. $\frac{3}{9}$, $\frac{5}{15}$, $\frac{7}{21}$. However, when you multiply the numerator and denominator of a unit fraction by an even number to find an equivalent fraction, e.g. $\frac{1}{3}$ by 2, 4 or 6, both the numerator and denominator will be even numbers, e.g. $\frac{2}{6}$, $\frac{4}{12}$, $\frac{6}{18}$.**