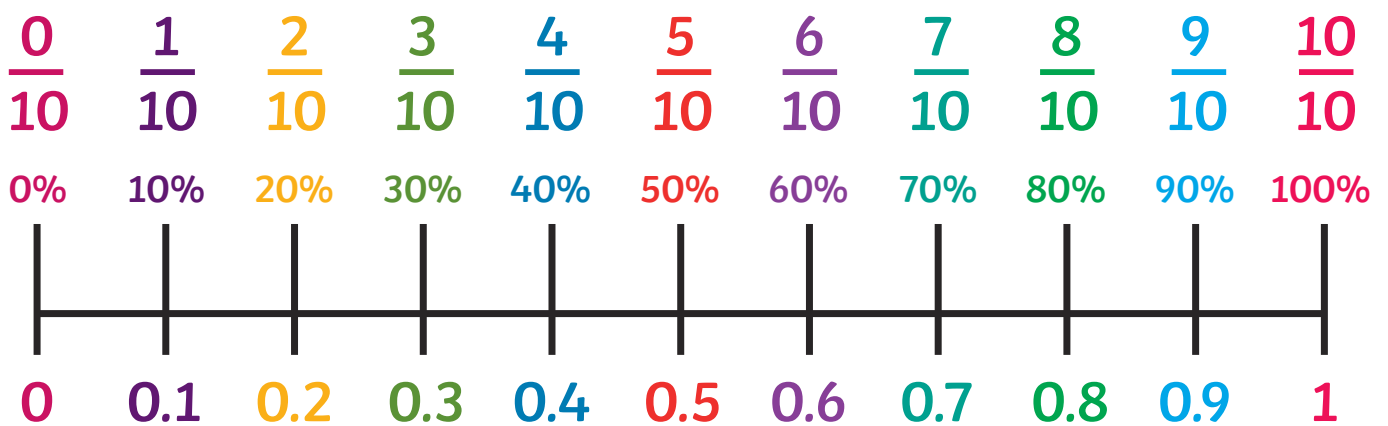
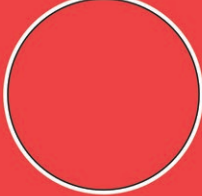

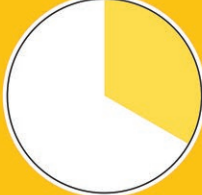





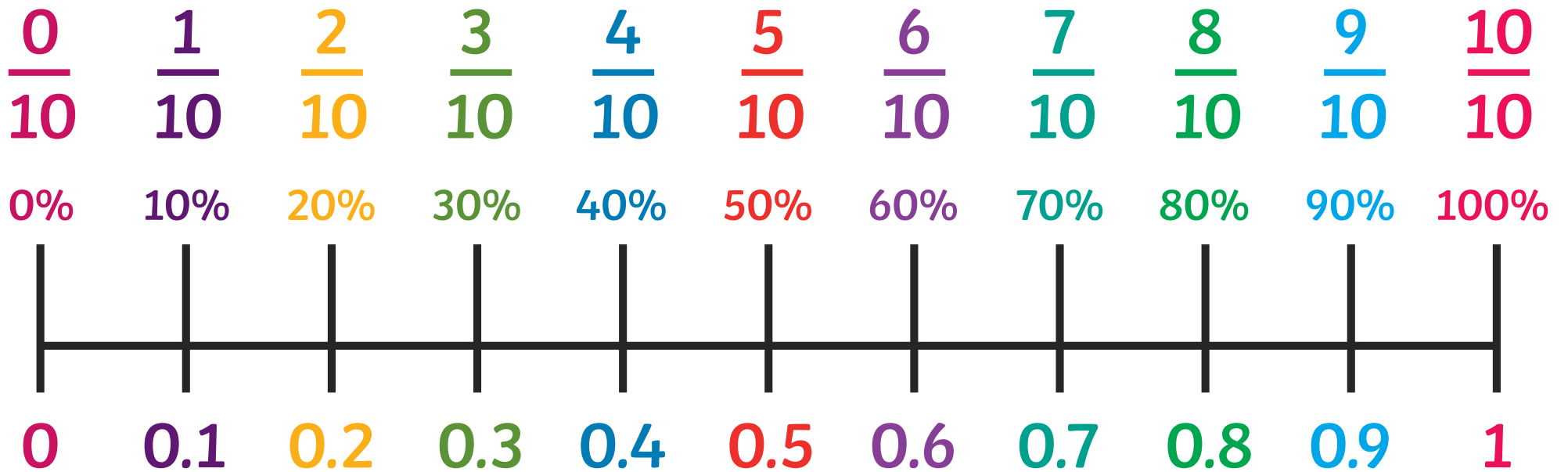


# Equivalent Fractions, Decimals and Percentages Activity Booklet



# Fractions, Decimals and Percentages

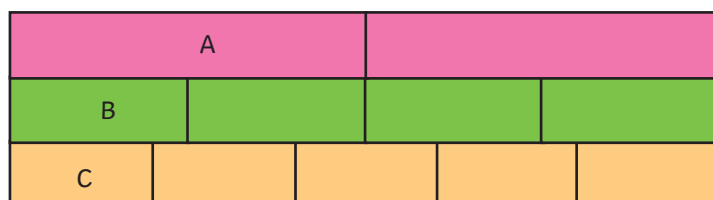
 = 1	=	1	=	100%
 = $\frac{1}{2}$	=	0.5	=	50%
 = $\frac{1}{3}$	=	0.33	=	33.3%
 = $\frac{1}{4}$	=	0.25	=	25%
 = $\frac{1}{5}$	=	0.2	=	20%
 = $\frac{1}{8}$	=	0.125	=	12.5%
 = $\frac{1}{10}$	=	0.1	=	10%
 = $\frac{1}{100}$	=	0.01	=	1%





- 1) a) Look at the bar models below. Use the first bar model to help you write A, B and C as a fraction, decimal and percentage.

<b>F</b>	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
<b>D</b>	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>P</b>	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%



A = \_\_\_\_\_

B = \_\_\_\_\_

C = \_\_\_\_\_

- b) Use question 1 to help you complete the table.

Fraction	Decimal	Percentage
$\frac{1}{2}$		
		30%
	0.6	
$\frac{1}{4}$		
		75%
$\frac{4}{5}$		

- 2) Place a letter to show where these representations fit on the percentage number line. The first one has been done for you.

a) 55%

b)

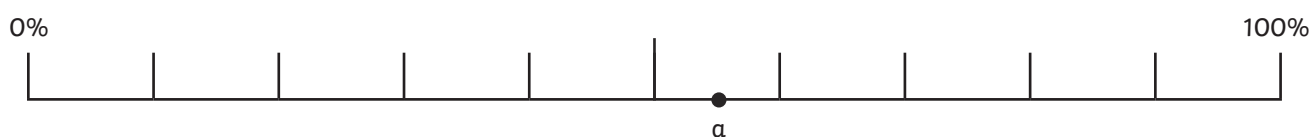


c) 0.4

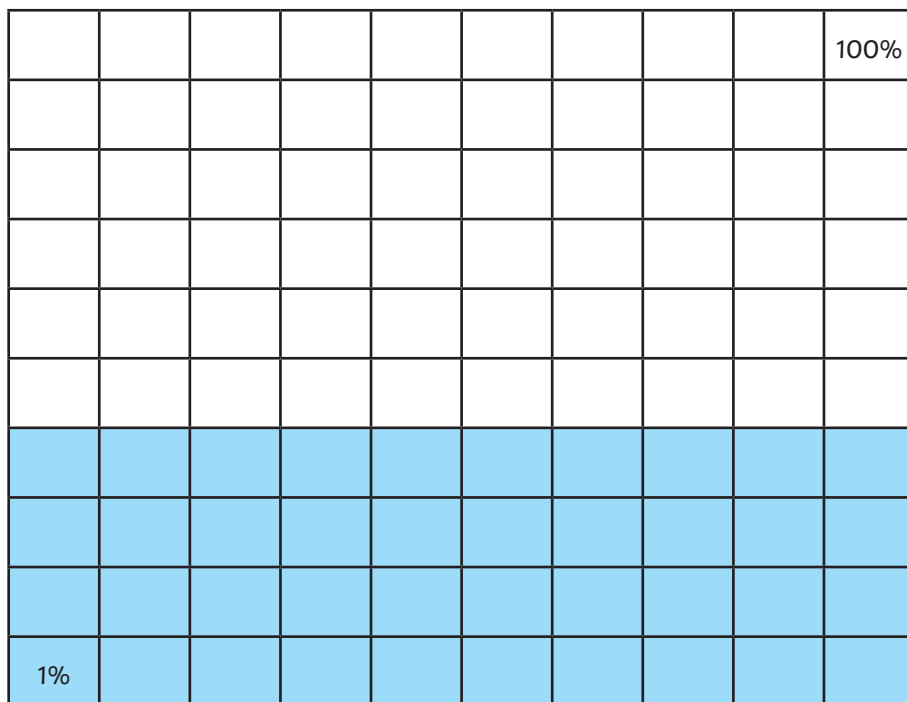


e) 10%

f)  $\frac{3}{4}$



**1)** Charmaine is playing the game, 'Race to 100%'. This is how far she has got with colouring in the grid.



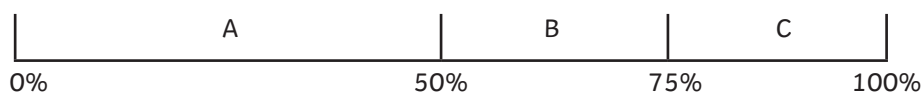
The next card that Charmaine turns over is  $\frac{6}{25}$ .



After shading  $\frac{6}{25}$ , I will have shaded more than 0.75 in total.

Is Charmaine correct? Explain how you know.

**2) a)** Fill in the blanks with A, B or C to show where each fraction would appear on the number line. The first one has been done for you.



$\frac{20}{50}$	<b>A</b>	0.8	
one-quarter		sixty-hundredths	
$\frac{4}{5}$		0.09	

**b)** Write a different fraction and decimal that would fit in space C.



- 1) 2 friends had some money to buy a present for their friend, Carlos.

Petra



I bought Carlos a present. I have spent 60% of my money and I have £20 left.

Jake



I bought Carlos a present. I have £18 left, this is 0.3 of the money I started with.

Circle true or false for each statement and write calculations to show how you know.

- a) Petra's present cost more than Jake's present.

True/False

---

- b) The total amount of money Petra and Jake started with was less than 0.8 of £150.

True/False

---

- 2) Toni has set herself a target of running at least 6km over 4 days. This is how much she has ran so far:

Day 1: 25% of the target

Day 2:  $\frac{4}{5}$  of the distance covered on Day 1

Day 3: 0.9km

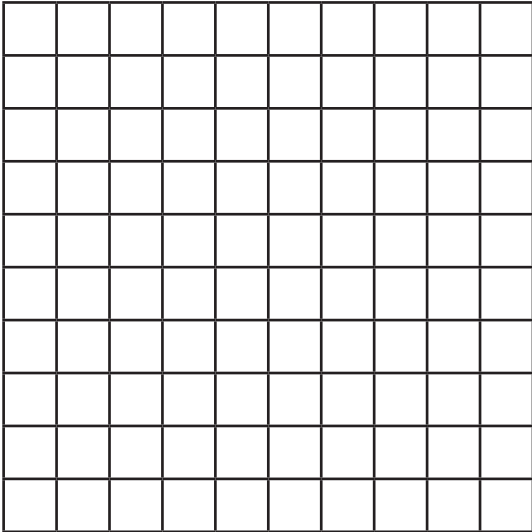
**Key fact: 1km = 1000m**

Has Toni got more or less than 30% of her target to complete? Show how you know.

# Percentage, Decimal and Fraction Colouring Activity

**10%**

Shade in 10%

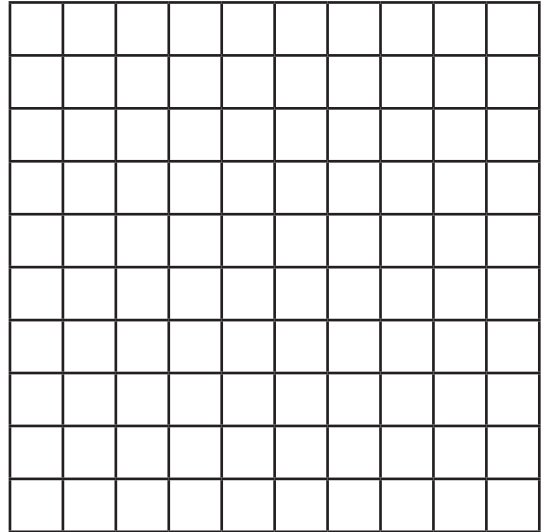


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**20%**

Shade in 20%

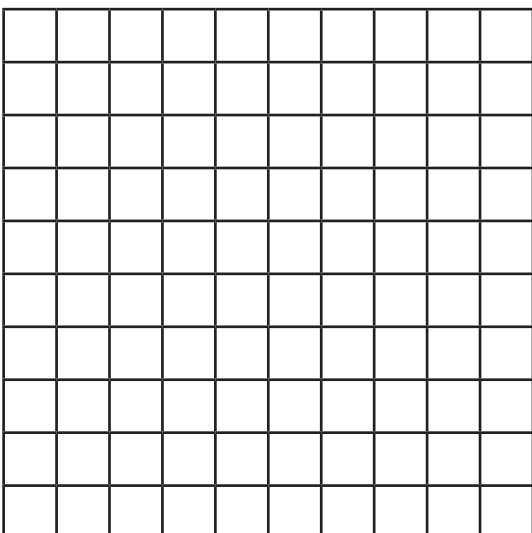


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**30%**

Shade in 30%

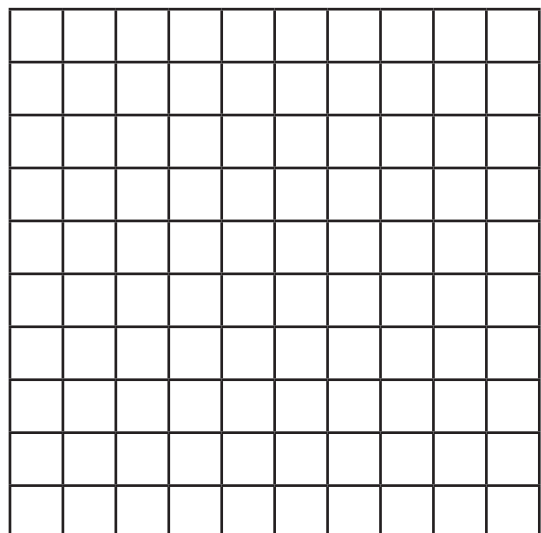


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**40%**

Shade in 40%



Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**50%**

Shade in 50%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**60%**

Shade in 60%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**70%**

Shade in 70%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**80%**

Shade in 80%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$



**90%**

Shade in 90%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**100%**

Shade in 100%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad}$$

**1%**

Shade in 1%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = 0.\quad$$

**5%**

Shade in 5%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = 0.\quad$$

**12%**

Shade in 12%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = 0.\quad$$

**25%**

Shade in 25%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

**75%**

Shade in 75%


Now can you fill in the blanks below?

$$\frac{\quad}{100} = \frac{\quad}{\quad} = 0.\quad$$

# Percentage, Decimal and Fraction Colouring Answers

$$10\% \text{ (10 of the 100 squares shaded in)} = \frac{10}{100} = \frac{1}{10} = 0.1$$

$$20\% \text{ (20 of the 100 squares shaded in)} = \frac{20}{100} = \frac{2}{10} \text{ or } \frac{1}{5} = 0.2$$

$$30\% \text{ (30 of the 100 squares shaded in)} = \frac{30}{100} = \frac{3}{10} = 0.3$$

$$40\% \text{ (40 of the 100 squares shaded in)} = \frac{40}{100} = \frac{4}{10} \text{ or } \frac{2}{5} = 0.4$$

$$50\% \text{ (50 of the 100 squares shaded in)} = \frac{50}{100} = \frac{5}{10} \text{ or } \frac{1}{2} = 0.5$$

$$60\% \text{ (60 of the 100 squares shaded in)} = \frac{60}{100} = \frac{6}{10} \text{ or } \frac{3}{5} = 0.6$$

$$70\% \text{ (70 of the 100 squares shaded in)} = \frac{70}{100} = \frac{7}{10} = 0.7$$

$$80\% \text{ (80 of the 100 squares shaded in)} = \frac{80}{100} = \frac{8}{10} \text{ or } \frac{4}{5} = 0.8$$

$$90\% \text{ (90 of the 100 squares shaded in)} = \frac{90}{100} = \frac{9}{10} = 0.9$$

$$100\% \text{ (100 of the 100 squares shaded in)} = \frac{100}{100} = \frac{10}{10} = 1.0$$

$$1\% \text{ (1 of the 100 squares shaded in)} = \frac{1}{100} = 0.01$$

$$5\% \text{ (5 of the 100 squares shaded in)} = \frac{5}{100} = 0.05$$

$$12\% \text{ (12 of the 100 squares shaded in)} = \frac{12}{100} = 0.12$$

$$25\% \text{ (25 of the 100 squares shaded in)} = \frac{25}{100} = \frac{1}{4} = 0.25$$

$$75\% \text{ (75 of the 100 squares shaded in)} = \frac{75}{100} = \frac{3}{4} = 0.75$$

# Ultimate Equivalent Fractions, Decimals and Percentages Challenge

Name:

Number Correct:

Time Taken:

Previous Score:



Match the following decimal numbers, percentages and fractions.

0.3	50%	$\frac{2}{5}$	0.25	$\frac{1}{2}$	12.5%
0.5	40%	$\frac{1}{5}$	0.375	$\frac{1}{8}$	50%
0.4	70%	$\frac{7}{10}$	0.75	$\frac{7}{8}$	87.5%
0.7	20%	$\frac{1}{2}$	0.5	$\frac{3}{8}$	25%
0.9	30%	$\frac{9}{10}$	0.125	$\frac{1}{4}$	75%
0.2	90%	$\frac{3}{10}$	0.875	$\frac{3}{4}$	37.5%

Write the equivalent fraction (in its simplest form) to the following:

75% =	30% =	15% =	90% =	50% =	35% =
0.6 =	0.95 =	0.1 =	0.25 =	0.625 =	0.2 =
25% =	0.9 =	0.5 =	5% =	0.4 =	85% =

Write the equivalent decimal and percentage to the following:

$\frac{1}{2}$ =	$\frac{3}{4}$ =	$\frac{1}{5}$ =	$\frac{1}{3}$ =
$\frac{4}{5}$ =	$\frac{3}{8}$ =	$\frac{1}{10}$ =	$\frac{1}{6}$ =
$\frac{7}{10}$ =	$\frac{2}{5}$ =	$\frac{5}{8}$ =	$\frac{7}{20}$ =

Write the missing equivalent fraction (in its simplest form), decimal or percentage as needed.

0.7 =	$\frac{1}{8}$ =	75% =
20% =	0.01 =	$\frac{2}{3}$ =

# Calculations Code Breaker

Reveal a joke by writing the percentage equivalent to the following fractions and decimal fractions. Use the grid to locate the letter that matches each answer.

The joke will read across the tables.

A	B	C	D	E	F	G	H	I	J	K	L	M
6%	15%	21%	5%	13%	24%	18%	7%	12%	1%	25%	19%	9%
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
22%	16%	11%	26%	2%	17%	20%	3%	10%	8%	14%	23%	4%

	0.08	$\frac{7}{100}$	0.06	$\frac{1}{5}$
Answer				
Letter				

$\frac{18}{100}$	0.16	$\frac{13}{100}$	0.17

$\frac{3}{100}$	0.11

	$\frac{2}{25}$	0.07	$\frac{13}{100}$	0.22
Answer				
Letter				

$\frac{2}{10}$	0.07	$\frac{13}{100}$

0.02	$\frac{6}{100}$	0.12	$\frac{22}{100}$

	0.21	$\frac{4}{25}$	0.09	$\frac{13}{100}$	0.17
Answer					
Letter					

$\frac{5}{100}$	0.16	$\frac{8}{100}$	0.22	
				?

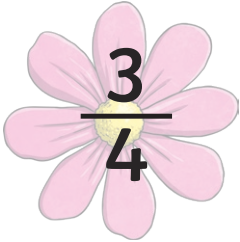
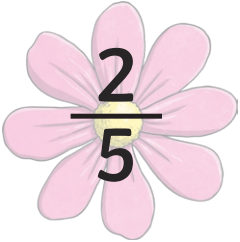
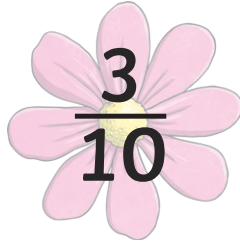






	0.06	$\frac{22}{100}$
Answer		
Letter		

0.03	$\frac{9}{100}$	0.15	$\frac{2}{100}$	0.13	$\frac{19}{100}$	0.19	$\frac{6}{100}$	
								.

# Fractions, Decimals and Percentages Board Game

## Instructions:

- Choose a space to start from and place your counter on it.
- Roll a dice and move clockwise that number of spaces.
- Find an equivalent fraction on the flowers and cover it over.
- If you land on a square where the answer has already been covered, miss your go.
- The winner is the player who covers the last flower.

0.4	37.5%	80%	0.75	12.5%
0.375				62.5%
0.125				40%
75%				25%
0.5	0.8	0.25	0.625	30%

I have...

$$\frac{1}{2}$$

Who has ...?

0.9

twinkl.co.uk

I have...

90%

Who has ...?

0.3

twinkl.co.uk

I have...

30%

Who has ...?

2

twinkl.co.uk

I have...

200%

Who has ...?

$$\frac{65}{100}$$

twinkl.co.uk

I have...

0.65

Who has ...?

$\frac{5}{6}$

twinkl.co.uk

I have...

$\frac{10}{12}$

Who has ...?

$\frac{3}{100}$

twinkl.co.uk

I have...

3%

Who has ...?

$\frac{3}{4}$

twinkl.co.uk

I have...

0.75

Who has ...?

60%

twinkl.co.uk



I have...

$$\frac{3}{5}$$

Who has ...?

$$10\%$$

twinkl.co.uk

I have...

$$\frac{1}{10}$$

Who has ...?

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

twinkl.co.uk

I have...

$$1$$

Who has ...?

$$\frac{3}{8}$$

twinkl.co.uk

I have...

$$0.375$$

Who has ...?

$$\frac{15}{100}$$

twinkl.co.uk

I have...

0.15

Who has ...?

0.05

twinkl.co.uk

I have...

5%

Who has ...?

$$\frac{8}{10}$$

twinkl.co.uk

I have...

0.8

Who has ...?

85%

twinkl.co.uk

I have...

$$\frac{85}{100}$$

Who has ...?

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

twinkl.co.uk

I have...

0.2

Who has ...?

0.68

twinkl.co.uk

I have...

68%

Who has ...?

35%

twinkl.co.uk

I have...

0.35

Who has ...?

66.6%

twinkl.co.uk

I have...

$\frac{2}{3}$

Who has ...?

$\frac{1}{4}$

twinkl.co.uk

I have...

25%

Who has ...?

$\frac{3}{7}$

twinkl.co.uk

I have...

$\frac{6}{14}$

Who has ...?

$\frac{7}{10}$

twinkl.co.uk

I have...

70%

Who has ...?

0.4

twinkl.co.uk

I have...

$\frac{4}{10}$

Who has ...?

45%

twinkl.co.uk

I have...

$$\frac{45}{100}$$

Who has ...?

$$33.3\%$$

twinkl.co.uk

I have...

$$\frac{1}{3}$$

Who has ...?

$$\frac{7}{8}$$

twinkl.co.uk

I have...

$$\frac{14}{16}$$

Who has ...?

$$1\%$$

twinkl.co.uk

I have...

$$0.01$$

Who has ...?

$$\frac{1}{8}$$

twinkl.co.uk

I have...

**0.125**

Who has ...?

**150%**

twinkl.co.uk

I have...

**1.5**

Who has ...?

**50%**

twinkl.co.uk