Fractions Mat

Working towards Year 4

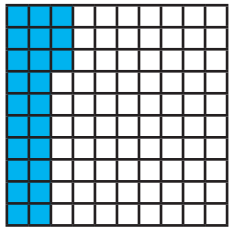
Recognise, Name and Write Fractions

Count up and down in hundredths

"One hundredth, two hundredths, three hundredths..."

$\frac{1}{100}$ $\frac{2}{100}$ $\frac{3}{100}$

Recognise that hundredths arise from dividing an object by one hundred



$\frac{23}{100}$

Solve Problems

Solve problems that involve fractions to calculate quantities, and fractions to divide quantities

Use the symbols <, = or > to compare these equations.

$\frac{1}{3}$ of 24 > $\frac{1}{4}$ of 28

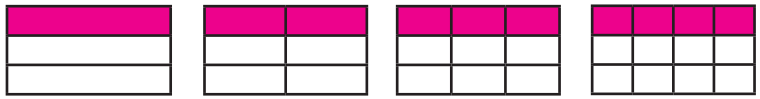
Solve simple measure and money problems involving fractions and decimals to two decimal places

A piece of wood is 1m long. It is cut in half. How long will be each piece?

0.5m or $\frac{1}{2}$ m

Equivalence

Recognise and show, using diagrams, families of common equivalent



$\frac{1}{3}$ = $\frac{2}{6}$ = $\frac{3}{9}$ = $\frac{4}{12}$

Recognise and write decimal equivalents of any number of tenths

$\frac{2}{10}$ = 0.2

Recognise and write decimal equivalents to

$\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$

$\frac{1}{4}$ = 0.25, $\frac{1}{2}$ = 0.5, $\frac{3}{4}$ = 0.75,

Calculate

Add and subtract fractions with the same denominator

$\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$ $\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$

Find the effect of dividing a one-digit number by 10, identifying the value of the digits in the answer as ones, tens and hundredths

2 ÷ 10 = 0.2

tenths

Compare and Order

Compare numbers with one decimal place

0.6 < 0.9

Rounding

Round decimals with one decimal place to the nearest whole number

1.5 rounds to 2

5.4 rounds to 5

Fractions Mat

Expected Year 4

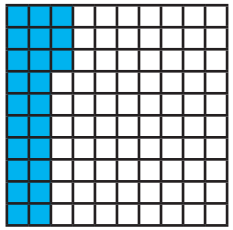
Recognise, Name and Write Fractions

Count up and down in hundredths

"One hundredth, two hundredths, three hundredths..."

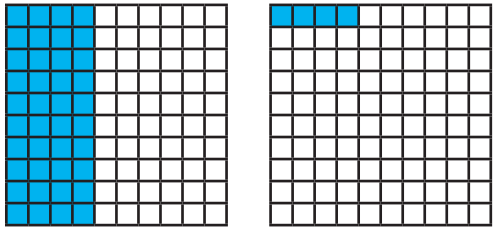
$\frac{1}{100}$ $\frac{2}{100}$ $\frac{3}{100}$

Recognise that hundredths arise from dividing an object by one hundred



$\frac{23}{100}$

...and dividing tenths by ten



$\frac{4}{10} \div 10 = \frac{4}{100}$

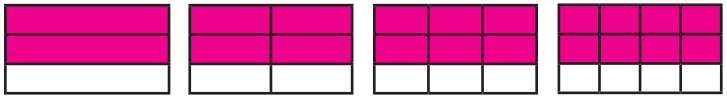
Compare and Order

Compare numbers with the same number of decimal places

$0.6 < 0.9$ $0.45 > 0.43$

Equivalence

Recognise and show, using diagrams, families of common equivalent



$\frac{2}{3} = \frac{4}{6} = \frac{6}{9} = \frac{8}{12}$

Recognise and write decimal equivalents of any number of tenths or hundredths

$\frac{2}{10} = 0.2$ and $\frac{23}{100} = 0.23$

Recognise and write decimal equivalents to

$\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$

$\frac{1}{4} = 0.25$, $\frac{1}{2} = 0.5$, $\frac{3}{4} = 0.75$

Rounding

Round decimals with one decimal place to the nearest whole number

1.5 rounds to 2

5.4 rounds to 5

Calculate

Add and subtract fractions with the same denominator

$\frac{5}{16} + \frac{4}{16} = \frac{9}{16}$ $\frac{11}{16} - \frac{5}{16} = \frac{6}{16}$

Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tens and hundredths

$23 \div 100 = 0.23$

tenths hundredths

Solve Problems

Solve problems that involve increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number

Use the symbols <, = or > to compare these equations.

$\frac{2}{3}$ of 24 > $\frac{3}{4}$ of 28

Solve simple measure and money problems involving fractions and decimals to two decimal places

2 litres of juice costs £1.30.
How much does one litre cost?

£0.65 or 65p

Fractions Mat

Greater Depth Year 4

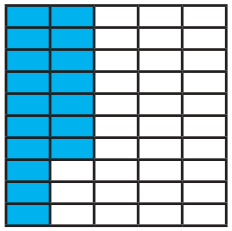
Recognise, Name and Write Fractions

Count up and down in hundredths

$\frac{67}{100}$ $\frac{66}{100}$ $\frac{65}{100}$

Apply your understanding that hundredths arise from dividing an object by one hundred

How does this diagram show $\frac{34}{100}$?



...and dividing tenths by ten

$\frac{7}{10} \div 10 = \frac{7}{100}$

Think how this be demonstrated using a metre ruler

Rounding

Round decimals with one decimal place to the nearest whole number

Explain why 1.5 rounds to 2

Equivalence

Recognise families of common equivalent

Write equivalent fractions to $\frac{3}{5}$

$\frac{3}{5} = \frac{6}{10} = \frac{9}{15} = \frac{12}{20}$

Recognise and write decimal equivalents of any number of tenths or hundredths

$\frac{2}{10} = 0.2$ and $\frac{23}{100} = 0.23$

Recognise and write decimal equivalents to

$\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$

using them in real life examples

$\frac{3}{4}$ of 1kg = 0.75kg

Compare and Order

Compare numbers with the same number of decimal places, explaining your answer:

Why is 0.39 > 0.33?

It has six hundredths more than 0.33

Calculate

Add and subtract fractions with the same denominator, using knowledge of common equivalents to write the answers in a simpler form

$\frac{5}{16} + \frac{4}{16} + \frac{3}{16} = \frac{12}{16} = \frac{3}{4}$

$\frac{11}{16} - \frac{5}{16} = \frac{6}{16} = \frac{3}{8}$

Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tens and hundredths

Explain what happens to the tens and ones when 23 ÷ 100 = 0.23.

Solve Problems

Solve problems that involve increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number

Explain why $\frac{7}{8}$ of 24 = $\frac{3}{4}$ of 28

Solve simple measure and money problems involving fractions and decimals to two decimal places

2l of lemonade costs £1.24. How much lemonade is in $\frac{3}{4}$ of the bottle and how much is it worth?

1.5l and £0.93