## Fractions

## Year 3

Find Unit Fractions of Quantities (1)

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Vocabulary:
Fraction Notation Divided Equal Numerator Denominator Whole Parts
Fraction Bar (Vinculum) Half Third Quarter Fifth Sixth Seventh Eighth
Ninth Tenth One-__ Bar Model Equation Expression Linear Volume
Area Quantity Times as much / Times the size of
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## Area contexts



Quantity contexts


The whole is $\qquad$ . The whole has been divided into $\qquad$ equal parts. Each part is $\stackrel{1}{-}$ of the whole.

$$
\underline{1} \text { of __ is_. }
$$



## Linear contexts



Volume contexts


## Generalisation:

## Fractions

## Year 3

Find Unit Fractions of Quantities (2)

## Vocabulary:

Fraction Notation Divided Equal Numerator Denominator Whole Parts Fraction Bar (Vinculum) Half Third Quarter Fifth Sixth Seventh Eighth Ninth Tenth One- $\qquad$ Bar Model Equation Expression Linear Volume Area Quantity Times as much / Times the size of


| 12 |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2 | 2 | 2 | 2 | 2 | 2 |

$12 \div 6=2 \quad \frac{1}{6}$ of $12=2$


We can division facts to help us find the fraction of an amount, representing this use bar models.

To find $\frac{1}{5}$ of 15 , we divide 15 into 5 equal parts.
15 divided by 5 is equal to 3 ,

$$
\text { so } \frac{1}{5} \text { of } 15 \text { is } 3 .
$$

The whole is 12 apples. The whole has been divided into 6 equal parts.

Each part is $\frac{1}{6}$ of the whole.
$\frac{1}{6}$ of 12 apples is 2 apples.

## $\frac{1}{5}$ of 15


$15 \div 5=3$
so $\frac{1}{5}$ of $15=3$

We can compare fractions with the same numerator. We can compare these in different contexts.

## Generalisation:

When both fractions have the same numerator, the greater the denominator, the greater the fraction.

When we compare fractions, the whole must be the same.

## Fractions

## Year 3

Find Unit Fractions of Quantities（3）

| Part | Part as a fraction of the whole | Number of equal parts in the whole | Whole |
| :---: | :---: | :---: | :---: |
| $\Delta$ | $\frac{1}{3}$ | 3 | $\triangle$ |
| $\square$ | $\frac{1}{5}$ | 5 | $\square 17$ |
| 大RRRR凡 | $\frac{1}{4}$ | 4 |  |
| $\longmapsto$ | $\frac{1}{5}$ | 5 | ص |
| 部部 | $\frac{1}{7}$ | 7 | 降降章年 |

If we know the size of the unit fraction，we can work out the size of the whole．

The whole is divided into $\qquad$ equal parts． Each part is $\qquad$ of the whole．

If one－ $\qquad$ is a part，then the whole is $\qquad$
times as much．Take $\qquad$ parts and put them together to make one whole．

## Fractions

## Year 5

## Find Non-Unit Fractions of Quantities.

## Vocabulary:

Fraction Notation Divided Equal Numerator Denominator Whole Parts Fraction Bar (Vinculum) Half Third Quarter Fifth Sixth Seventh Eighth Ninth Tenth One- $\qquad$ Number line Part-Part-Whole Model Units Previous Next Estimate Intervals Convert Improper Fractions Mixed Numbers Add Subtract (Minus) Aggregation Augmentation Reduction Partitioning Difference

$\frac{1}{5}$ of $15=3$
$\frac{2}{5}$ of $15=6$
of $15=9$
of $15=12$
of $15=15$

## We can skip count in unit fractions to help us

 find the quantity of a non-unit fraction.2 one-fifths of 15 is equal to 6,
3 one-fifths of 15 is equal to 9...


$$
40 \div 5=8
$$

so $\frac{1}{5}$ of $40=8$
$40 \div 5=8$
so $\frac{1}{5}$ of $40=8$

$$
\frac{3}{5} \text { of } 40=24
$$

If the whole is unknown but we know the quantity of one part - we can find the size of the whole.

One-sixth of a number is equal to thirty. 6 one-sixths is equal to one whole.

To find the whole, multiply the value of 1 one-sixth by 6.

$\frac{1}{6}$ of a number is 30

$$
6 \times 30=180
$$

We can skip count in unit fractions to help us find the quantity of a non-unit fraction.

To find 3 one-fifths of 40, first find one-fifth of 40 by dividing by 5, and then multiply by 3.

## Generalisation:

Divide the whole by the denominator and then multiply quotient by the numerator.

