Year 3 fractions

Prior Knowledge
Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity (Y1&2)
Write simple fractions, for example 1/2 of 6 = 3 and recognise the equivalence of 2/4 and ½ (Y2)

fractions		Working Towards	Within	Expected	Above
	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10				
	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators				
	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators				
	Recognise and show, using diagrams, equivalent fractions with small denominators				
	Add and subtract fractions with the same denominator within one whole				
	Compare and order unit fractions, and fractions with the same denominators				
	Solve problems that involve all of the above				

Highlights: _____

_____

Glossary

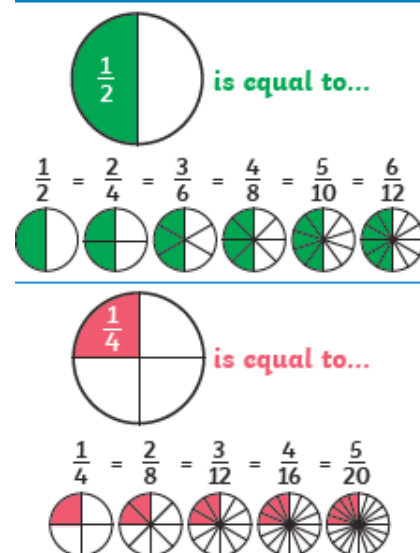| vocabulary	word class	definition
whole	noun	a thing that is complete
fraction	noun	a numerical quantity that is not a whole number (e.g. 1/2, 0.5)
half	noun	either of two equal or corresponding parts into which something is or can be divided
equal	adjective	being the same in quantity, size, degree, or value
quarter	noun	each of four equal or corresponding parts into which something is or can be divided
third	number	each of three equal parts into which something is or may be divided
tenth	number	each of ten equal parts into which something is or may be divided
unit fraction		A unit fraction is any fraction with 1 as its numerator (top number), and a whole number for the denominator (bottom number)
non-unit fraction		A non-unit fraction is a fraction with a numerator (top number) greater than 1. They could be proper fractions (less than 1 whole, where the denominator (bottom number) is larger than the numerator) or improper fractions
denominator	noun	the number below the line in a vulgar fraction; a divisor

Resources

1 whole 2 halves 3 thirds 4 quarters 5 fifths

6 sixths 7 sevenths 8 eighths 9 ninths 10 tenths

$0 \quad \frac{1}{10} \quad \frac{2}{10} \quad \frac{3}{10} \quad \frac{4}{10} \quad \frac{5}{10} \quad \frac{6}{10} \quad \frac{7}{10} \quad \frac{8}{10} \quad \frac{9}{10} \quad 1$

$\frac{0}{10} \quad \frac{1}{10} \quad \frac{2}{10} \quad \frac{3}{10} \quad \frac{4}{10} \quad \frac{5}{10} \quad \frac{6}{10} \quad \frac{7}{10} \quad \frac{8}{10} \quad \frac{9}{10} \quad \frac{10}{10}$

0   0.1   0.2   0.3   0.4   0.5   0.6   0.7   0.8   0.9   1

Numerator (how many)
How many parts are you looking at? → $\frac{3}{4}$

Denominator (what kind)
How many equal parts is the whole divided into?

$-\frac{1}{3}$ $-\frac{2}{5}$ $-\frac{5}{8}$

Equivalent Fractions

$\frac{1}{2}$ is equal to...

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$$

$\frac{1}{4}$ is equal to...

$$\frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{4}{16} = \frac{5}{20}$$
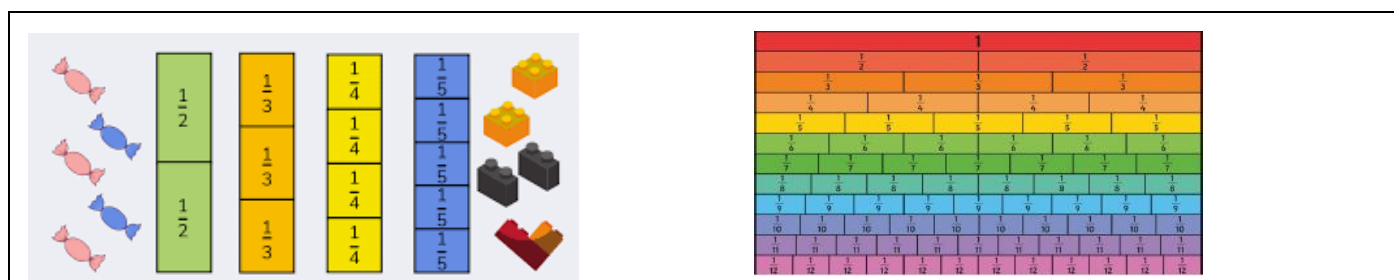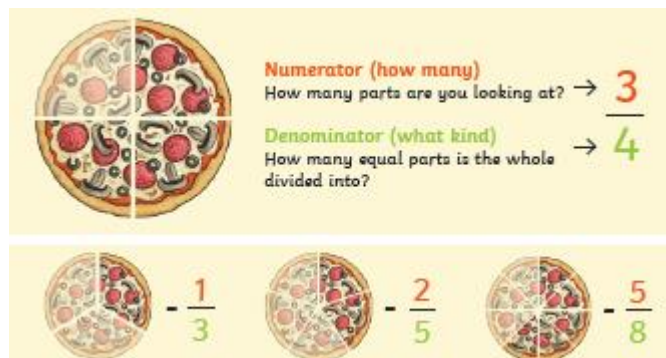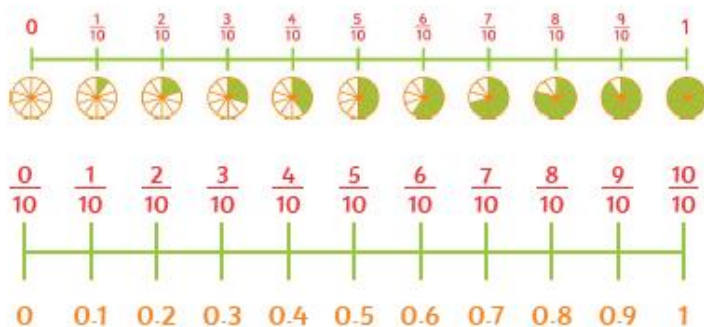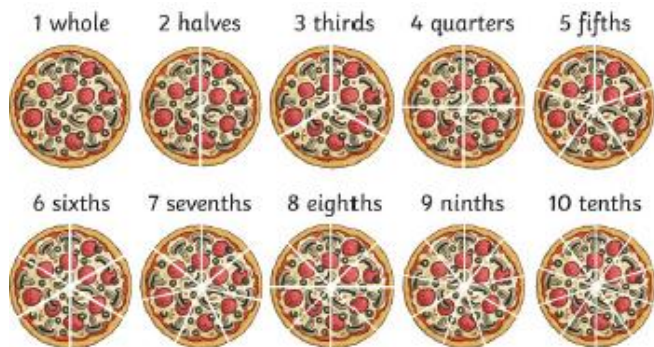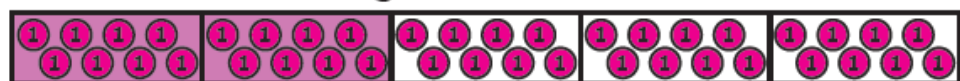
Fractions of Amounts

$$\frac{1}{4} \text{ of } 24 = 6$$

$$\frac{1}{3} \text{ of } 72 = 24$$

$$\frac{2}{5} \text{ of } 40 = 16$$

Add and Subtract Fractions

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

$$\frac{3}{7} + \frac{2}{7} = \frac{5}{7}$$

$$\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$$

Year 4 (including decimals)

- Recognise and show, using diagrams, families of common equivalent fractions
- Count up and down in hundredths; recognise that hundredths arise when dividing an object by a 100 and dividing tenths by 10.
- Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- Add and subtract fractions with the same denominator
- Recognise and write decimal equivalents of any number of tenths or hundredths
- Recognise and write decimal equivalents to ¼; ½; ¾
- 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, tenths and hundredths
- Round decimals with 1 decimal place to the nearest whole number
- Compare numbers with the same number of decimal places up to 2 decimal places
- Solve simple measure and money problems involving fractions and decimals to 2 decimal places

Year 6 (including decimals and percentages)

- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- Compare and order fractions, including fractions >1
- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- Multiply simple pairs of proper fractions, writing the answer in its simplest form
- Divide proper fractions by whole numbers
- Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.
- Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers are up to three decimal places
- Multiply one-digit numbers with up to 2 decimal places by whole numbers
- Use written division methods in cases where the answer has up to 2 decimal places
- Solve problems which require answers to be rounded to specified degrees of accuracy
- Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts