

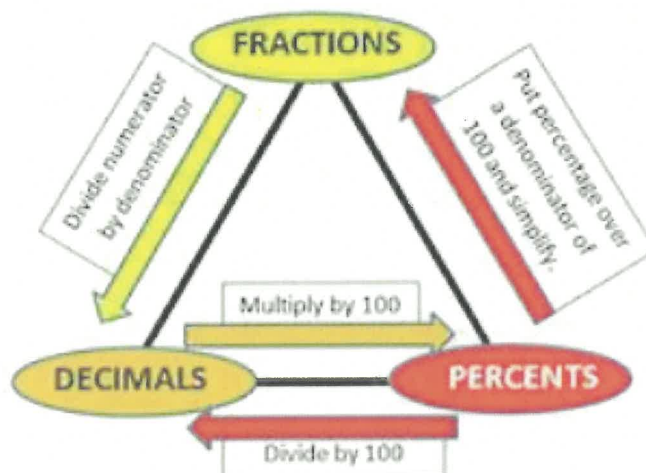
Madani Boys School

Mathematics

YEAR 7

KNOWLEDGE ORGANISER

YEAR 7	
WEEK	HALF TERM 3
18	Fractions basics (Equivalent, simplify, convert)
19	F/D/P Conversions / Ordering Fractions, decimals and percentages
20	Fraction Addition and Subtraction
21	Fraction Multiplication and Division
22	Ratio Calculations (simplify, share, recipes)
23	Revision and Assessment 3



FRACTIONS I

What do I need to be able to do?

You should be able to:

- Understand different representations of fractions
- Fully simplify fractions
- Recognise and find equivalent fractions
- Convert between mixed numbers and improper fractions
- Add/subtract any fractions
- Add/subtract mixed numbers

Key Words

- **Numerator:** the top number of a fraction
- **Denominator:** the bottom number of a fraction
- **Equivalent:** of equal value
- **Mixed Number:** a number with an integer and a proper fraction
- **Improper Fraction:** a fraction where the numerator is larger than the denominator
- **Coprime:** two numbers which share no common factors (except 1)

Representing Fractions

numerator $\frac{3}{4}$
denominator

We say 'three quarters' or 'three out of four'

$3 - 4$

075

All of these show $\frac{3}{4}$ 75%

Equivalent Fractions

Two fractions are equivalent if they represent the same quantity

If the numerator and denominator have the same multiplier, they are equivalent

$$\frac{5}{7} \xrightarrow{\times 5} \frac{25}{35}$$

$$\frac{1}{4} \xrightarrow{\times 2} \frac{2}{8}$$

Each of these diagrams represents an equivalent amount

They all show '2 out of every 3'

or $\frac{2}{3}$

Mixed Numbers and Improper Fractions

Fractions can represent more than one whole.

The denominator tells us how many parts make up one whole

$\frac{7}{4}$

$\frac{9}{5}$ This tells us that one whole is made up of 5 parts. We have 9 parts, so we can make one whole plus 4 parts

$\frac{4}{5}$

$3\frac{1}{2}$

$\frac{10}{3}$

$\frac{3}{2}$

Simplifying Fractions

You must always simplify your fractions if you can

Sometimes a picture can help to visualise the problem

Once you cannot find a common factor, the fraction is fully simplified

$\frac{7}{10}$

This fraction is fully simplified as 7 and 10 have no common factors. We can say that 7 and 10 are COPRIME

Both would get us to the right answer, just one takes a bit longer!

Adding/Subtracting Fractions

Common denominators

$\frac{2}{7} + \frac{4}{7} = \frac{6}{7}$

Remember that the denominator doesn't change

$\frac{5}{8} - \frac{4}{8} = \frac{1}{8}$

We can just subtract 4 from 5!

$\frac{1}{10} + \frac{3}{10} = \frac{4}{10} = \frac{2}{5}$

4 and 10 have a common factor (2)

You must always fully simplify your fractions

Adding/Subtracting Fractions

Common multiples

$\frac{3}{5} + \frac{1}{10} = \frac{6}{10} + \frac{1}{10} = \frac{7}{10}$

10 is a multiple of 5 (5 x 2) so, using equivalent fractions we can say $\frac{3}{5} = \frac{6}{10}$

$\frac{3}{4} - \frac{1}{12} = \frac{9}{12} - \frac{1}{12} = \frac{8}{12} = \frac{2}{3}$

12 is a multiple of 4 (4 x 3) so, using equivalent fractions we can say $\frac{3}{4} = \frac{9}{12}$

Remember you must always fully simplify your fractions!

$\frac{1}{2} + \frac{2}{3} + \frac{1}{6} = \frac{3}{6} + \frac{4}{6} + \frac{1}{6} = \frac{8}{6} = \frac{4}{3} = 1\frac{1}{3}$

Here, we know that 2 and 3 share a common multiple of 6, so we can say $\frac{1}{2} = \frac{3}{6}$ and $\frac{2}{3} = \frac{4}{6}$

We need to give our answer as a mixed number

Adding/Subtracting Fractions

Different denominators

$\frac{1}{5} + \frac{3}{4}$

We need to find a common denominator using equivalent fractions

$\frac{1}{5} = \frac{4}{20}$

$\frac{3}{4} = \frac{15}{20}$

$\frac{1}{5} + \frac{3}{4} = \frac{4}{20} + \frac{15}{20} = \frac{19}{20}$

$\frac{3}{11} + \frac{2}{3} = \frac{9}{33} + \frac{22}{33} = \frac{31}{33}$

The LCM of 3 and 11 is 33, so our equivalent fractions are:

$\frac{3}{11} = \frac{9}{33}$ $\frac{2}{3} = \frac{22}{33}$

$\frac{5}{7} + \frac{4}{9} = \frac{45}{63} + \frac{28}{63} = \frac{73}{63} = 1\frac{10}{63}$

Let's convert it to a mixed number

Remember you can find the LCM of 7 and 9 by listing their multiples: 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91, 98, 105, 112, 119, 126, 133, 140, 147, 154, 161, 168, 175, 182, 189, 196, 203, 210, 217, 224, 231, 238, 245, 252, 259, 266, 273, 280, 287, 294, 301, 308, 315, 322, 329, 336, 343, 350, 357, 364, 371, 378, 385, 392, 399, 406, 413, 420, 427, 434, 441, 448, 455, 462, 469, 476, 483, 490, 497, 504, 511, 518, 525, 532, 539, 546, 553, 560, 567, 574, 581, 588, 595, 602, 609, 616, 623, 630, 637, 644, 651, 658, 665, 672, 679, 686, 693, 700, 707, 714, 721, 728, 735, 742, 749, 756, 763, 770, 777, 784, 791, 798, 805, 812, 819, 826, 833, 840, 847, 854, 861, 868, 875, 882, 889, 896, 903, 910, 917, 924, 931, 938, 945, 952, 959, 966, 973, 980, 987, 994, 1001, 1008, 1015, 1022, 1029, 1036, 1043, 1050, 1057, 1064, 1071, 1078, 1085, 1092, 1099, 1106, 1113, 1120, 1127, 1134, 1141, 1148, 1155, 1162, 1169, 1176, 1183, 1190, 1197, 1204, 1211, 1218, 1225, 1232, 1239, 1246, 1253, 1260, 1267, 1274, 1281, 1288, 1295, 1302, 1309, 1316, 1323, 1330, 1337, 1344, 1351, 1358, 1365, 1372, 1379, 1386, 1393, 1400, 1407, 1414, 1421, 1428, 1435, 1442, 1449, 1456, 1463, 1470, 1477, 1484, 1491, 1498, 1505, 1512, 1519, 1526, 1533, 1540, 1547, 1554, 1561, 1568, 1575, 1582, 1589, 1596, 1603, 1610, 1617, 1624, 1631, 1638, 1645, 1652, 1659, 1666, 1673, 1680, 1687, 1694, 1701, 1708, 1715, 1722, 1729, 1736, 1743, 1750, 1757, 1764, 1771, 1778, 1785, 1792, 1799, 1806, 1813, 1820, 1827, 1834, 1841, 1848, 1855, 1862, 1869, 1876, 1883, 1890, 1897, 1904, 1911, 1918, 1925, 1932, 1939, 1946, 1953, 1960, 1967, 1974, 1981, 1988, 1995, 2002, 2009, 2016, 2023, 2030, 2037, 2044, 2051, 2058, 2065, 2072, 2079, 2086, 2093, 2100, 2107, 2114, 2121, 2128, 2135, 2142, 2149, 2156, 2163, 2170, 2177, 2184, 2191, 2198, 2205, 2212, 2219, 2226, 2233, 2240, 2247, 2254, 2261, 2268, 2275, 2282, 2289, 2296, 2303, 2310, 2317, 2324, 2331, 2338, 2345, 2352, 2359, 2366, 2373, 2380, 2387, 2394, 2401, 2408, 2415, 2422, 2429, 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9408, 9415, 9422, 9429, 9436, 9443, 9450, 9457, 9464, 9471, 9478, 9485, 9492, 9499, 9506, 9513, 9520, 9527, 9534, 9541, 9548, 9555, 9562, 9569, 9576, 9583, 9590, 9597, 9604, 9611, 9618, 9625, 9632, 9639, 9646, 9653, 9660, 9667, 9674, 9681, 9688, 9695, 9702, 9709, 9716, 9723, 9730, 9737, 9744, 9751, 9758, 9765, 9772, 9779, 9786, 9793, 9800, 9807, 9814, 9821, 9828, 9835, 9842, 9849, 9856, 9863, 9870, 9877, 9884, 9891, 9898, 9905, 9912, 9919, 9926, 9933, 9940, 9947, 9954, 9961, 9968, 9975, 9982, 9989, 9996, 10003, 10010, 10017, 10024, 10031, 10038, 10045, 10052, 10059, 10066, 10073, 10080, 10087, 10094, 10101, 10108, 10115, 10122, 10129, 10136, 10143, 10150, 10157, 10164, 10171, 10178, 10185, 10192, 10199, 10206, 10213, 10220, 10227, 10234, 10241, 10248, 10255, 10262, 10269, 10276, 10283, 10290, 10297, 10304, 10311, 10318, 10325, 10332, 10339, 10346, 10353, 10360, 10367, 10374, 10381, 10388, 10395, 10402, 10409, 10416, 10423, 10430, 10437, 10444, 10451, 10458, 10465, 10472, 10479, 10486, 10493, 10500, 10507, 10514, 10521, 10528, 10535, 10542, 10549, 10556, 10563, 10570, 10577, 10584, 10591, 10598, 10605, 10612, 10619, 10626, 10633, 10640, 10647, 10654, 10661, 10668, 10675, 10682, 10689, 10696, 10703, 10710, 10717, 10724, 10731, 10738, 10745, 10752, 10759, 10766, 10773, 10780, 10787, 10794, 10801, 10808, 10815, 10822, 10829, 10836, 10843, 10850, 10857, 10864, 10871, 10878, 10885, 10892, 10899, 10906, 10913, 10920, 10927, 10934, 10941, 10948, 10955, 10962, 10969, 10976, 10983, 10990, 10997, 11004, 11011, 11018, 11025, 11032, 11039, 11046, 11053, 11060, 11067, 11074, 11081, 11088, 11095, 11102,

FRACTIONS 2

What do I need to be able to do?

You should be able to:

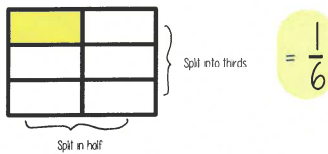
- Multiply unit fractions
- Multiply non-unit fractions
- Use cross-cancelling to simplify fractions before multiplying
- Divide integers by fractions
- Divide fractions by fractions
- Find fractions of amounts
- Use a given fraction to find the whole
- Find the reciprocal of an integer/fraction

Key Words

- **Numerator:** the top number of a fraction
- **Denominator:** the bottom number of a fraction
- **Unit fraction:** a fraction with a numerator of one
- **Commutative:** changing the order of the operations doesn't change the result
- **Reciprocal:** the reciprocal of a number is 1 divided by the number
- **Coprime:** two numbers which share no common factors (except 1)

Multiplying unit fractions

$$\frac{1}{2} \times \frac{1}{3} \quad \text{"One half of one third"}$$

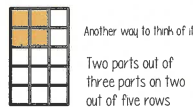


Multiplying any fractions

Example 1

$$\frac{2}{3} \times \frac{2}{5} = \frac{4}{15}$$

"Two thirds of two fifths"



Another way to think of it

Example 2

$$\frac{5}{7} \times \frac{14}{15} = \frac{5 \times 14}{7 \times 15} = \frac{70}{105}$$

Remember to simplify where possible!

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

See cross-cancelling for a quicker method

Example 3

$$\frac{3}{2} \times \frac{7}{3} = \frac{21}{6} = \frac{7}{2} = 3\frac{1}{2}$$

Cross Cancelling Method

$$\frac{2}{3} \times \frac{6}{7} = \frac{4}{7}$$

This method means that we do not need to simplify our answer as it should be fully simplified already.

Example 1

$$\frac{5}{9} \times \frac{18}{25}$$

this becomes

$$\frac{1}{3} \times \frac{2}{5} = \frac{2}{15}$$

Remember; Multiply the numerators then multiply the denominators

Example 2

$$\frac{15}{27} \times \frac{36}{45}$$

this becomes

$$\frac{1 \times 4}{3 \times 3} = \frac{4}{9}$$

Dividing integers by a unit fraction

$$3 \div \frac{1}{3} \quad \text{Think of this as 'how many times does a third go into 3?'}$$



there are three thirds in one whole, so there are 9 thirds in 3 wholes

Reciprocals

A number multiplied by its reciprocal is always 1

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

$$5 \times \frac{1}{5} = 1$$

The reciprocal of a is $\frac{1}{a}$

Dividing by a fraction, $\frac{1}{a}$, is the same as multiplying by its reciprocal, a

Example:

$$3 \div \frac{1}{3} = 9$$

$$3 \times 3 = 9$$

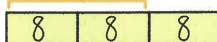
Finding Fractions of Amounts

Find $\frac{1}{2}$ of 10 "Share 10 into 2 equal parts"



Find $\frac{2}{3}$ of 24

2 parts is 16



$\frac{1}{3}$ is 8 as $24 \div 3 = 8$

Each part must be worth 8

$$\frac{2}{3} \text{ of } 24 = 16$$

Find $\frac{7}{10}$ of £105

£105 - 10 = £1050

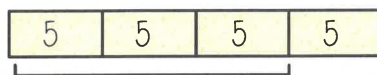


$7 \times £105 = £7350$

$$\frac{7}{10} \text{ of } £105 = £735.00$$

Reverse Fractions of Amounts

$\frac{3}{4}$ of a number is 15. What is the number?



15

If 3 parts = 15, then one part must = 5

The original number was 20

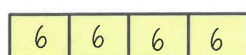
$\frac{2}{3}$ of a number is 16. What is $\frac{3}{4}$ of the number?



16

If 2 parts = 16, then one part must = 8

The number is $8 \times 3 = 24$. So what is $\frac{3}{4}$ of 24?



$3 \times 6 = 18$

$$= 18$$

Dividing Fractions

Example 1

$$\frac{2}{3} \div \frac{5}{7}$$

$$\frac{2}{3} \times \frac{7}{5}$$

$$\frac{2 \times 7}{3 \times 5}$$

$$\frac{14}{15}$$

Example 2

$$\frac{5}{12} \div \frac{25}{18}$$

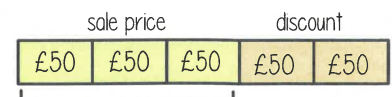
$$\frac{5}{12} \times \frac{18}{25}$$

$$\frac{1 \times 3}{2 \times 5}$$

$$\frac{3}{10}$$

Worded problem

A TV is on sale for $\frac{2}{5}$ off the price. It now costs £150. How much did it cost originally?



£150

So the original price of the TV was $5 \times £50 = £250$

FDP EQUIVALENCE

What do I need to be able to do?

You should be able to:

- Convert fluently between fractions, decimals and percentages
- Order fractions, decimals and percentages
- Know the key FDP equivalences

HIGHER TIER ONLY

- Convert recurring decimals into fractions

Key Words

- Percent: parts per hundred
- Fraction: how many parts out of a whole
- Decimal: a number with a decimal point used to separate ones, tenths, hundredths etc...
- Tenth: one whole split into 10 parts
- Equivalent: of equal value
- Recurring decimal: a decimal number with a digit that repeats forever

Percentages to Decimals

Convert 37% to a decimal
Remember this means 37 out of 100 or 37 hundredths. If 1 hundredth is 0.01, 37 hundredths would be 0.37

$$\begin{array}{ll} 12\% = 0.12 & 123\% = 1.23 \\ 85\% = 0.85 & 0.1\% = 0.001 \end{array}$$

Percentage \rightarrow Decimal, $\div 100$

Percentages to Fractions

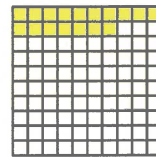
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$$\begin{array}{ll} 12\% = \frac{12}{100} = \frac{3}{25} & 123\% = \frac{123}{100} = 1\frac{23}{100} \\ 85\% = \frac{85}{100} = \frac{17}{20} & \end{array}$$

Percentage \rightarrow Fraction, write over 100 and then simplify

Visual aids

Sometimes, it can be helpful to draw a diagram to help understand what is happening



Here are 100 squares I have 17 yellow squares

The fraction of yellow squares is $\frac{17}{100}$

The percentage of yellow squares is 17%

Decimals to Percentages

Convert 0.63 to a percentage
0.63 is equal to 6 tenths plus 3 hundredths or 63 hundredths. So 0.63 = 63%

$$\begin{array}{ll} 0.23 = 23\% & 0.535 = 53.5\% \\ 0.02 = 2\% & 2.13 = 213\% \end{array}$$

Decimal \rightarrow Percentage, $\times 100$

Decimals to Fractions

Convert 0.63 to a fraction
0.63 is equal to 6 tenths plus 3 hundredths or 63 hundredths. We can write this as $\frac{63}{100}$

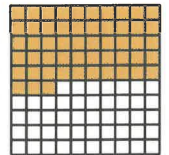
$$\begin{array}{ll} 0.23 = \frac{23}{100} & 0.535 = \frac{535}{1000} = \frac{107}{200} \\ 0.02 = \frac{2}{100} = \frac{1}{50} & \end{array}$$

Here we have 5 tenths, 3 hundredths and 5 thousandths or 535 thousandths

Always make sure that you fully simplify your fraction!

I want to make 0.53 of this big square orange

So I want to make 53 hundredths orange. This is the same as 53% or $\frac{53}{100}$

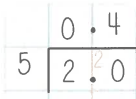


Fractions to Decimals

Convert $\frac{2}{5}$ to a decimal

Remember a divide symbol is an empty fraction, so this is the same as $2 \div 5$

$$= 0.4$$



Remember

$$\frac{1}{10} = 0.1 \quad \frac{1}{4} = 0.25 \quad \frac{1}{2} = 0.5$$

Fractions to Percentages

Convert $\frac{2}{5}$ to a percentage

Here we need to be confident with equivalent fractions. We know percent means out of 100 so we need to find an equivalent fraction with a denominator of 100.

$$\frac{2}{5} = \frac{40}{100} = 40\%$$

Recurring Decimals to Fractions

HIGHER TIER ONLY

Example (ONE RECURRING DIGIT)

Convert $0.\dot{3}$ to a fraction

$$\begin{array}{l} x = 0.3333... \\ 10x = 3.3333... \\ \hline 9x = 3 \rightarrow x = \frac{3}{9} = \frac{1}{3} \end{array}$$

$10x - x = 9x$

Example (TWO RECURRING DIGITS)

Convert $0.\dot{3}5$ to a fraction

$$\begin{array}{l} x = 0.353535... \\ 100x = 35.353535... \\ \hline 99x = 35 \rightarrow x = \frac{35}{99} \end{array}$$

Because we have two digits that are repeating, we need to multiply it by 100!

Ordering FDP

Put in ascending order, $0.3, \frac{1}{3}, 0.303, 35\%, \frac{31}{100}$

Remember ascending means from smallest to largest

- 1 Choose a form to compare them in, here let's choose to compare them as decimals
0.3, 0.3, 0.303, 0.35, 0.31
- 2 Put them in ascending order 0.3, 0.303, 0.31, 0.3, 0.35
- 3 Convert them back to their original form
0.3, 0.303, $\frac{31}{100}$, $\frac{1}{3}$, 35%

Key FDP Equivalences

You are expected to know some of the key FDP equivalences without working them out

Decimal	Percentage	Fraction
0.5	50%	$\frac{1}{2}$
0.25	25%	$\frac{1}{4}$
0.75	75%	$\frac{3}{4}$
0.2	20%	$\frac{1}{5}$
0.1	10%	$\frac{1}{10}$
0.3	33.3%	$\frac{1}{3}$

Example

Convert $0.2\dot{5}$ to a fraction

$$\begin{array}{l} x = 0.255555... \\ 10x = 2.555555... \\ 100x = 25.555555... \\ \hline 90x = 23 \rightarrow x = \frac{23}{90} \end{array}$$

Here, we cannot just take 2555 away from 0.255 as we will not reduce it to an integer

$100x - 10x = 90x$

What do I need to be able to do?

You should be able to:

- Convert fluently between fractions, decimals and percentages
- Order fractions, decimals and percentages
- Know the key FDP equivalences

FDP EQUIVALENCE

Key Words

- Percent: parts per hundred
- Fraction: how many parts out of a whole
- Decimal: a number with a decimal point used to separate ones, tenths, hundredths etc..
- Tenth: one whole split into 10 parts
- Equivalent: of equal value
- Recurring decimal: a decimal number with a digit that repeats forever

Percentages to Decimals

Convert 37% to a decimal
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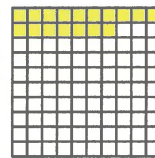
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Decimal \rightarrow Percentage, $\times 100$

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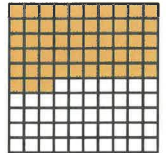
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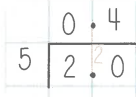


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Convert $0.\dot{3}$ to a fraction

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$$10x = 3.3333...$$

$$9x = 3 \rightarrow x = \frac{3}{9} = \frac{1}{3}$$

$$3.333... - 0.333... = 3$$

Example (TWO RECURRING DIGITS)

Convert $0.3\dot{5}$ to a fraction

$$x = 0.353535...$$

$$100x = 35.353535...$$

$$99x = 35 \rightarrow x = \frac{35}{99}$$

Because we have two digits that are repeating, we need to multiply it by 100!

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 $0.3, 0.\dot{3}, 0.303, 0.35, 0.31$
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 $0.3, 0.303, \frac{31}{100}, \frac{1}{3}, 35\%$

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$0.\dot{3}$	33.3%	$\frac{1}{3}$

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Example

Convert $0.2\dot{5}$ to a fraction

$$x = 0.255555...$$

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$$\begin{array}{l} 10x = 2.555555... \\ 100x = 25.55555... \end{array}$$

$$90x = 23 \rightarrow x = \frac{23}{90}$$

$$100x - 10x = 90x$$

$$25.555... - 2.55... = 23$$

YEAR 7 - PROPORTIONAL REASONING...

Ratio and Scale

@whistowmaths
What do I need to be able to do?

By the end of this unit you should be able to:

- Simplify any given ratio
- Share an amount in a given ratio
- Solve ratio problems given a part

Solutions should be modelled, explained and solved

Keywords

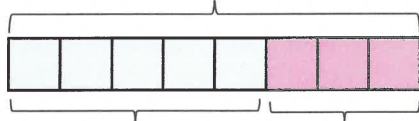
- Ratio:** a statement of how two numbers compare
- Equal Parts:** all parts in the same proportion, or a whole shared equally
- Proportion:** a statement that links two ratios
- Order:** to place a number in a determined sequence
- Part:** a section of a whole
- Equivalent:** of equal value
- Factors:** integers that multiply together to get the original value
- Scale:** the comparison of something drawn to its actual size.



Representing a ratio

"For every 5 boys there are 3 girls"

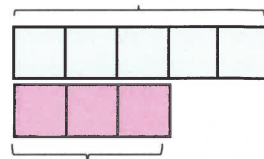
This is the "whole" - boys and girls together



This represents the 5 boys This represents the 3 girls

5:3

This represents the 5 boys Double Number Line



This is the "whole" - boys and girls together

This represents the 3 girls

Order is Important

"For every dog there are 2 cats"



Dogs: Cats
1:2

The ratio has to be written in the same order as the information is given

e.g. 2:1 would represent 2 dogs for every 1 cat ✗

Simplifying a ratio

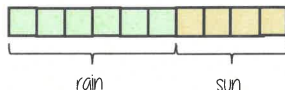
Cancel down the ratio to its lowest form

"For every 6 days of rain there are 4 days of sun"

6:4

÷ by 2 ↓

3:2



Find the biggest common factor that goes into all parts of the ratio

For 6 and 4 the biggest factor (number that multiplies into them is 2)

"For every 3 days of rain there are 2 days of sun" - when this happens twice the ratio becomes 6:4

Ratio In (or n:1)

This is asking you to cancel down until the part indicated represents 1

Show the ratio 4:20 in the ratio of 1:n

The question states that this part has to be 1 unit
Therefore Divide by 4

4:20
↓
1:5

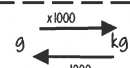
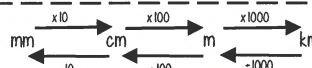
This side has to be divided by 4 too - to keep in proportion

H the n part does not have to be an integer for this type of question

Units are important:

When using a ratio - all parts should be in the same units

Useful Conversions



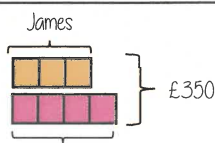
Sharing a whole into a given ratio

James and Lucy share £350 in the ratio 3:4
Work out how much each person earns

Model the Question

James: Lucy

3:4



Lucy
£350 ÷ 7 = £50

□ = one part = £50

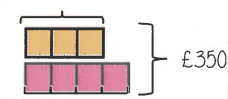
Find the value of one part

Whole £350
7 parts to share between
(3 James, 4 Lucy)

Put back into the question

James: Lucy

James = 3 x £50 = £150



Lucy = 4 x £50 = £200

(x50) 3:4 (x50)
£150:£200

Finding a value given 1:n (or n:1)

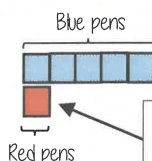
Inside a box are blue and red pens in the ratio 5:1
If there are 10 red pens how many blue pens are there?

Model the Question

Blue: Red

5:1

□ = one part = 10 pens

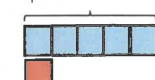


One unit = 10 pens

Put back into the question

Blue pens = 5 x 10 = 50 pens

Blue: Red
(x10) 5:1 (x10)
50:10



Red pens = 1 x 10 = 10 pens

There are 50 Blue Pens

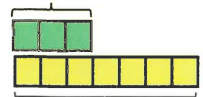
Ratio as a fraction



Trees: Flowers

3:7

Trees



Ratio

There are 3 parts for trees

Flowers

Fraction of trees

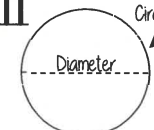
Number of parts in group
Total number of parts

3
10

Fraction

Tree parts 3 + Flower parts 7 = 10

π



Circumference

The ratio of a circle's circumference to its diameter