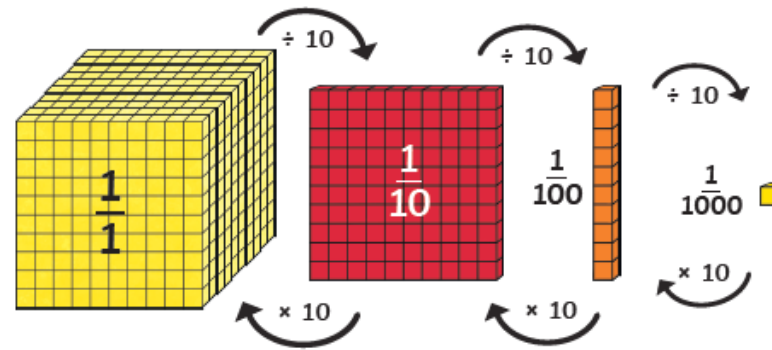
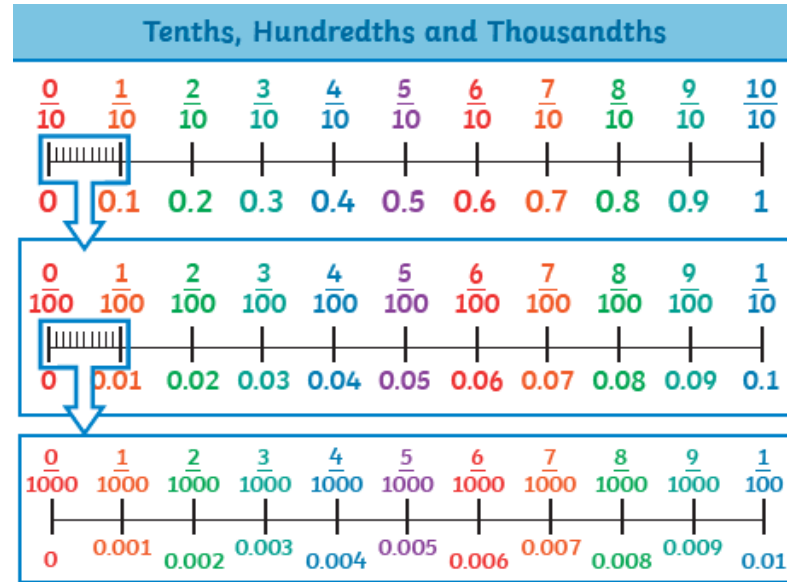


Key Vocabulary	Definition
Decimal	a number in a number system based on 10
Tenth	A fraction, one part of 10 equal parts (1/10)
Hundredth	one part of one hundred divided into 100 parts (1/100)
Decimal tenth	One part of 10 equal parts (0.1)
Decimal hundredth	One part of 100 equal parts (0.01)
Decimal equivalents	two decimal numbers that are equivalent (e.g. 5/10 and 50/100)
Part-whole model	The relationship between the whole and its parts
Rounding	to change a number to a value which is easier to work with
Decimal point	Separates the whole number from the fractional part (5.5)
Place value	The position of a digit in a number



Order and Compare Numbers with Three Decimal Places

Ones	Tenths	Hundredths	Thousandths
	$\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$ $\frac{1}{1000}$ $\frac{1}{1000}$
0	.	2	1 3

Ones	Tenths	Hundredths	Thousandths
1		$\frac{1}{100}$ $\frac{1}{100}$	$\frac{1}{1000}$ $\frac{1}{1000}$
1	.	0	2 2

Ones	Tenths	Hundredths	Thousandths
1	$\frac{1}{10}$		$\frac{1}{1000}$ $\frac{1}{1000}$
2	.	1	0 3

Decimal Numbers as Fractions

$0.71 = \frac{71}{100} = \frac{7}{10} + \frac{1}{100}$

$0.37 = \frac{37}{100} = \frac{3}{10} + \frac{7}{100}$



Multiplying and Dividing by 10, 100 and 1000

Tens	Ones	Tenths	Hundredths	Thousandths
3	8			
$\div 10$		3	8	
3	8			
$\times 10$			3	8

Tens	Ones	Tenths	Hundredths	Thousandths
3	8			
$\div 100$		0	3	8
3	8			
$\times 100$			3	8

Tens	Ones	Tenths	Hundredths	Thousandths		
3	8					
$\div 1000$		0	0	3	8	
3	8					
$\times 1000$			0	0	3	8

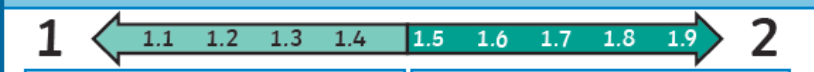
Adding and Subtracting Decimals

$0.8 + 0.001 = 0.801$

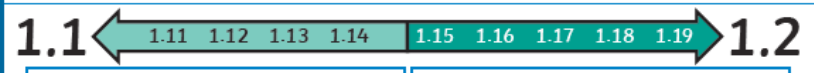
$1.031 - 0.23 = 0.801$

$0.4005 + 0.4005 = 0.801$

Rounding Decimals

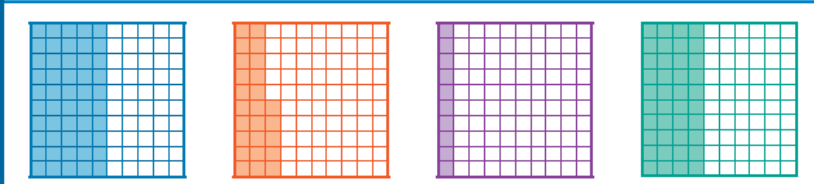


If the tenths digit is 1, 2, 3 or 4, we round down to the nearest whole number. If the tenths digit is 5, 6, 7, 8 or 9, we round up to the nearest whole number.

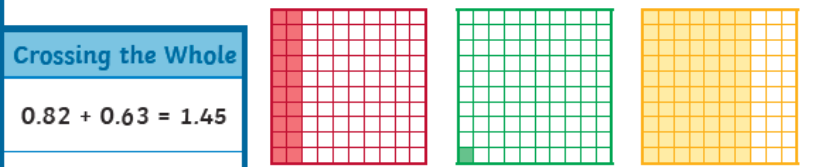


If the hundredths digit is 1, 2, 3 or 4, we round down to the nearest tenth. If the hundredths digit is 5, 6, 7, 8 or 9, we round up to the nearest tenth.

Percentage and Decimal Equivalents



$50\% = \frac{50}{100} = \frac{1}{2} = 0.5$ $25\% = \frac{25}{100} = \frac{1}{4} = 0.25$ $10\% = \frac{10}{100} = \frac{1}{10} = 0.1$ $40\% = \frac{40}{100} = \frac{2}{5} = 0.4$



$20\% = \frac{20}{100} = \frac{1}{5} = 0.2$ $1\% = \frac{1}{100} = 0.01$ $70\% = \frac{70}{100} = \frac{7}{10} = 0.7$

Crossing the Whole

$0.82 + 0.63 = 1.45$

$2.531 - 0.6 = 1.931$

Zooming out...

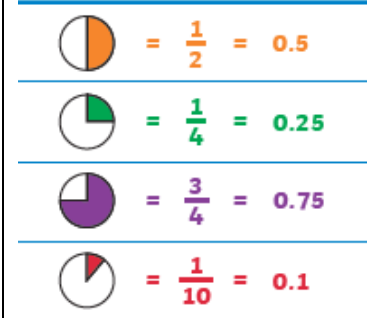
- 'Decimal' means 'based on 10' and comes from Latin 'decima' ('a tenth part')
- Egyptian hieroglyphs show basic decimals were used (2900BC)
- 1400BC, decimals were developed by the Chinese. They spread to the Middle East, then to Europe.

Real Life

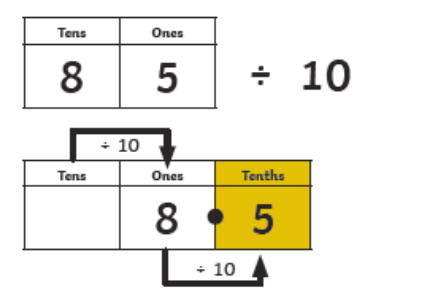
- **Money.** We use decimals every time we use money
- **Measurements.** Needing something which measures 1.25m or 3.5L
- **Buying petrol.** Filling up your car with 40.5L. Also paying for the petrol!
- **Measuring temperatures.** 'Normal' temperature for a child is around 36.4°C

Prior Knowledge

Fraction and Decimal Equivalents



Dividing by 10



Dividing by 100

