

Decimals

Knowledge Organiser

Key Vocabulary

tenths

hundredths

decimal

tenths

decimal

hundredths

decimal

equivalents

part-whole

model

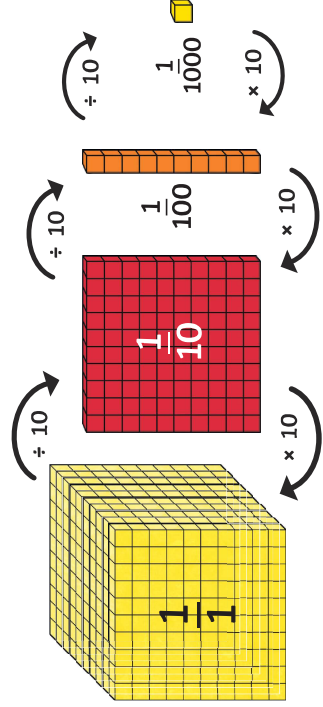
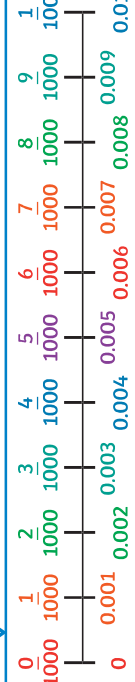
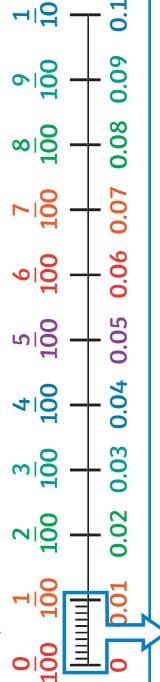
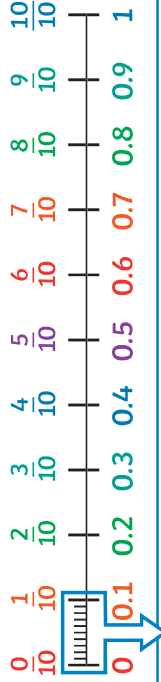
rounding

decimal point

place value



Tenths, Hundredths and Thousandths



rounding

decimal point

place value



Order and Compare Numbers with Three Decimal Places

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

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

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

Decimal Numbers as Fractions

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

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

Decimals

Knowledge Organiser

Multiplying and Dividing by 10, 100 and 1000

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

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

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

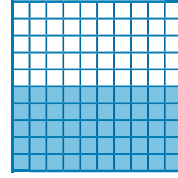
If the tenths digit is 5, 6, 7, 8 or 9, we round up to the nearest whole number.



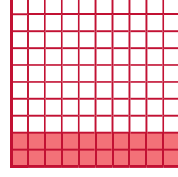
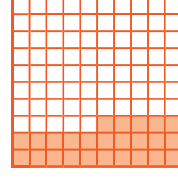
If the hundredths digit is 1, 2, 3 or 4, we round down to the nearest tenth.

If the hundredths digit is 5, 6, 7, 8 or 9, we round up to the nearest tenth.

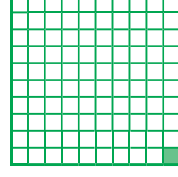
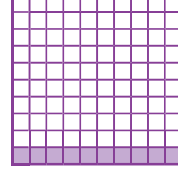
Percentage and Decimal Equivalents



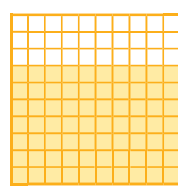
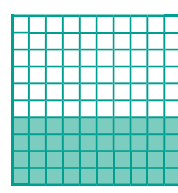
$$50\% = \frac{50}{100} = \frac{1}{2} = 0.5 \quad 25\% = \frac{25}{100} = \frac{1}{4} = 0.25 \quad 10\% = \frac{10}{100} = \frac{1}{10} = 0.1 \quad 40\% = \frac{40}{100} = \frac{2}{5} = 0.4$$



$$20\% = \frac{20}{100} = \frac{1}{5} = 0.2$$



$$1\% = \frac{1}{100} = 0.01$$



$$70\% = \frac{70}{100} = \frac{7}{10} = 0.7$$

Crossing the Whole

$$0.82 + 0.63 = 1.45$$

$$2.531 - 0.6 = 1.931$$