Maths

Decimals

Y6

Knowledge

- Three decimal places
- Decimals as fractions
- Fractions to decimals

Skills

- Multiply by 10, 100 and 1000
- Divide by 10, 100 and 1000
- Multiply decimals by integers
- Divide decimals by integers
- Division to solve problems

Vocabulary

Decimal place, decimal fraction, equivalent, recurring, tenth, sharing, exchanging, round to 3 d.p, hundredth, thousandth

Fractions to Decimals

To convert fractions to decimals the denominator must be made 100.

$\frac{7}{20} = \frac{35}{100}$ or 0.35 (×5 / ×5)

$\frac{8}{200} = \frac{4}{100}$ or 0.04 (÷2 / ÷2)

When the denominator is not a factor or multiple of 100 then you divide the numerator by the denominator.

$\frac{7}{8} = 7 \div 8$

	0	.	8	7	5
8	7	.	7 0	6 0	4 0

Place Value to 3 dp

Tens	Ones	.	tenths	hundredths	thousandths
	1 1 1	.	0.1 0.1 0.1 0.1	0.01 0.01	0.001 0.001 0.001 0.001 0.001 0.001

Multiplying Decimals by Integers

	3	.	4	5
×				3
1	0	.	3	5
	1		1	

3.21 × 3 = 9.63

Ones	.	tenths	hundredths
1 1 1	.	0.1 0.1	0.01
1 1 1	.	0.1 0.1	0.01
1 1 1	.	0.1 0.1	0.01

Dividing Decimals by Integers

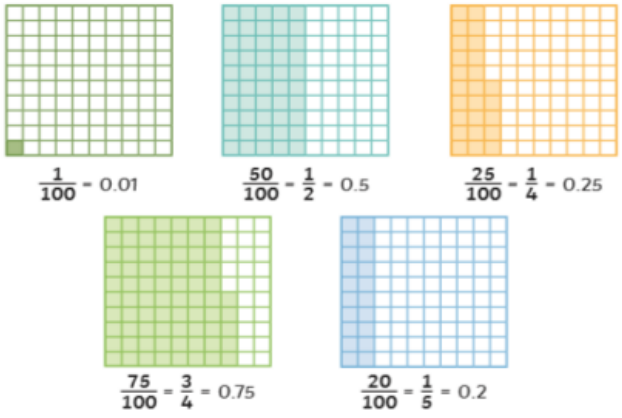
8.12 ÷ 4

	2	.	0 3
4	8	.	1 2

6.93 ÷ 3 = 2.31

Ones	.	tenths	hundredths
1 1	.	0.1 0.1 0.1	0.01
1 1	.	0.1 0.1 0.1	0.01
1 1	.	0.1 0.1 0.1	0.01

Decimal Numbers as Fractions



$\frac{1}{100} = 0.01$ $\frac{50}{100} = \frac{1}{2} = 0.5$ $\frac{25}{100} = \frac{1}{4} = 0.25$

$\frac{75}{100} = \frac{3}{4} = 0.75$ $\frac{20}{100} = \frac{1}{5} = 0.2$

Multiplying and Dividing by 10, 100 and 1000

Thousands	Hundreds	Tens	Ones	.	tenths	hundredths	thousandths
			2	.	0	8	
		2	0	.	8		
			2	.	0	8	

× 10 ÷ 10

Thousands	Hundreds	Tens	Ones	.	tenths	hundredths	thousandths
		4	3	.	5		
4	3	5	0	.			
		4	3	.	5		

× 100 ÷ 100

Thousands	Hundreds	Tens	Ones	.	tenths	hundredths	thousandths
			1	.	3	5	1
1	3	5	1	.			
			1	.	3	5	1

× 1000 ÷ 1000