Place Value

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

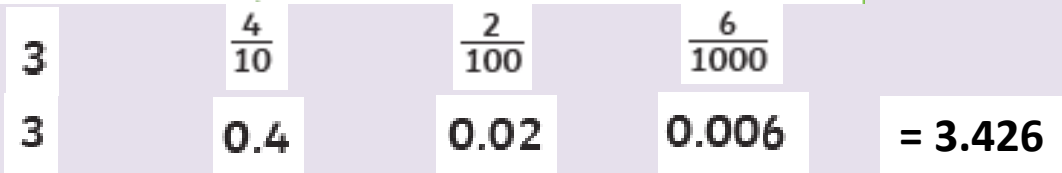| 3	$\frac{4}{10}$	$\frac{2}{100}$	$\frac{6}{1000}$	
3	0.4	0.02	0.006	= 3.426

Vocabulary

decimal place	Position of the digits to the right of a decimal point Represents a fraction of a whole number
2 decimal places 2dp	A number with 2 digits after the decimal point
3 decimal places 3dp	A number with 3 digits after the decimal point
decimal fraction	A fraction with a denominator of 10,100,1,000 … It can be written with a decimal point
One Tenth	1/10 or 0.1
One Hundredth	1/100 or 0.01
One Thousandth	1/1000 or 0.001

1 whole = 10 tenths

1 tenth = 10 hundredths

1 hundredth = 10 thousandths

Converting Fractions to Decimals   Some Key Facts

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

×4
$\frac{7}{25} = \frac{28}{100}$ or 0.28
×4

Make an equivalent fraction with a denominator of 100 (by multiplying or dividing) to convert into a decimal number

×2
$\frac{7}{50} = \frac{14}{100}$ or 0.14
×2

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

$\frac{1}{2} = \frac{50}{100}$	0.5
$\frac{1}{4} = \frac{25}{100}$	0.25
$\frac{3}{4} = \frac{75}{100}$	0.75
$\frac{1}{5} = \frac{20}{100}$	0.2
$\frac{1}{10} = \frac{10}{100}$	0.1

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

$\frac{1}{1000} = 0.001$

Multiplying a decimal by an integer

$3.21 \times 3 = 9.63$

Ones	.	tenths	hundredths

	3 .	4	5
×			3
1	0 .	3	5
		1	1

Dividing a decimal by an integer

$6.93 \div 3 = 2.31$

Ones	.	tenths	hundredths

$8.12 \div 4$

		2 .	0	3
4	8 .	1̶	¹2

Multiplying and Dividing by 10, 100 and 1,000

Multiplying by powers of 10
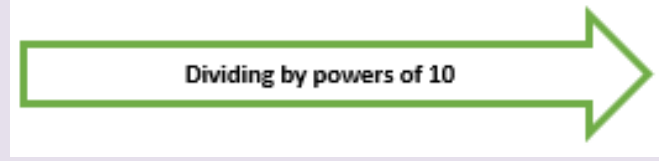
Thousands	Hundreds	Tens	Ones	.	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$	
			4	.	3	7		
		4	3	.	7			X 10
			4	3	.	7		
	4	3	7	.				X 100
			4	3	.	7		
4	3	7	0	.				X 1,000

Dividing by powers of 10

Thousands	Hundreds	Tens	Ones	.	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$	
		2	9	.				
			2	.	9			÷ 10
		2	9	.				
			0	.	2	9		÷ 100
		2	9	.				
			0	.	0	2	9	÷ 1,000