



Year:	6	Unit:	Decimals
What will I learn this year?			

Key Vocabulary
decimal place
decimal fraction
recurring decimal
equivalent fraction
tenth
sharing
partitioning
exchanging
rounding to 3d.p.
hundredth
thousandth
equal to
remainder
grouping

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

$3 + \frac{4}{10} + \frac{2}{100} + \frac{6}{1000}$

 $\longleftrightarrow$
3.426

 $\longleftrightarrow$
 $3 + 0.4 + 0.02 + 0.006$

1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009

Fractions to Decimals

$\frac{7}{20} = \frac{35}{100}$ or 0.35
 $\frac{7}{25} = \frac{28}{100}$ or 0.28
 $\frac{7}{50} = \frac{14}{100}$ or 0.14
 $\frac{8}{200} = \frac{4}{100}$ or 0.04

When the denominator is not a factor or multiple of 100

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

	0	8	7	5
8	7	0	6	0

Dividing Decimals by Integers

$8.12 \div 4$

	2	0	3
4	8	1	2

$6.93 \div 3 = 2.31$

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

Multiplying and Dividing by 10, 100 and 1000

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

$\times 10$ (arrow from Tens to Hundreds)

$\div 10$ (arrow from Ones to Tenths)

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

$\times 100$ (arrow from Tens to Thousands)

$\div 100$ (arrow from Ones to Hundredths)

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

$\times 1000$ (arrow from Ones to Thousands)

$\div 1000$ (arrow from Thousands to Ones)

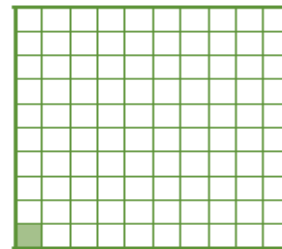
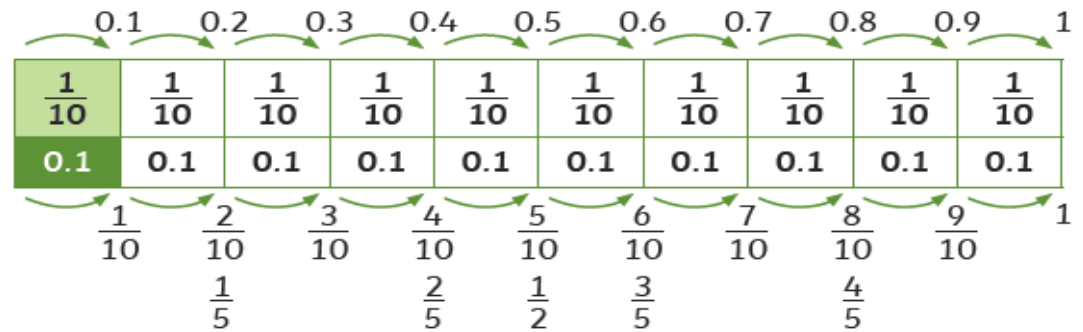
Multiplying Decimals by Integers

	3	4	5
$\times$			3
1	0	3	5
	1	1	

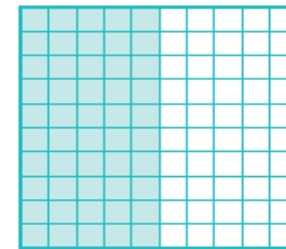
$$3.21 \times 3 = 9.63$$

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

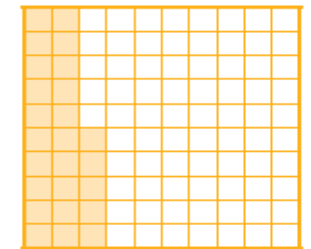
Decimal Numbers as Fractions



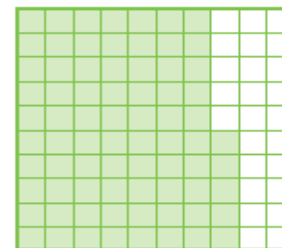
$$\frac{1}{100} = 0.01$$



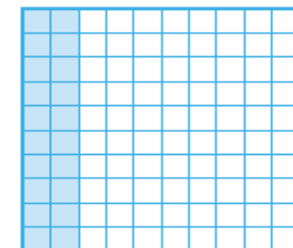
$$\frac{50}{100} = \frac{1}{2} = 0.5$$



$$\frac{25}{100} = \frac{1}{4} = 0.25$$



$$\frac{75}{100} = \frac{3}{4} = 0.75$$



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

$$\frac{1}{3} = 0.33$$

$$\frac{1}{8} = 0.125$$

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

