



Key Vocabulary
decimal place (dp)
decimal fraction
recurring fraction
equivalent fraction
tenth
sharing
partitioning
exchanging
rounding to 3dp
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 0.001 0.001



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	0	4	0

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



Multiplying and Dividing by 10, 100 and 1000

Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths
			2	0	8	
		← × 10				
		2	0	8		
				→ + 10		
			2	0	8	

Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths
		4	3	5		
← × 100						
4	3	5	0			
			→ + 100			
		4	3	5		

Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths
			1	3	5	1
← × 1000						
1	3	5	1			
			→ + 1000			
			1	3	5	1

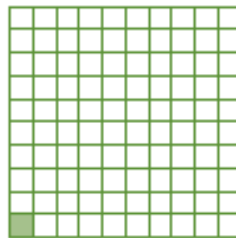
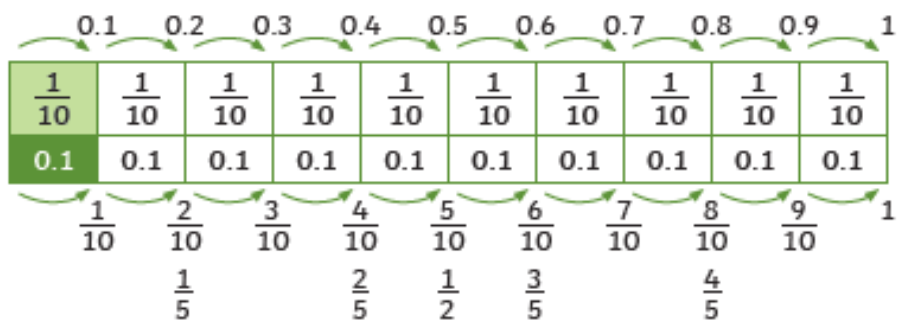
Multiplying Decimals by Integers

	3	4	5
×			3
1	0	3	5
	1	1	

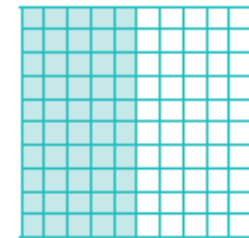
3.21 × 3 = 9.63

Ones	tenths	hundredths
● ● ●	● ●	●
● ● ●	● ●	●
● ● ●	● ●	●

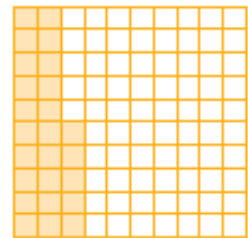
Decimal Numbers as Fractions



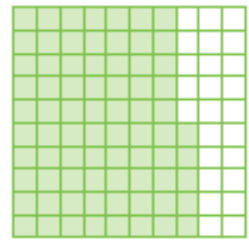
$\frac{1}{100} = 0.01$



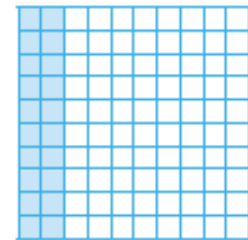
$\frac{50}{100} = \frac{1}{2} = 0.5$



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



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



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

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

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

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



How do you convert from a decimal to a fraction? What about from percentage to a decimal?
 What is 0.35 as a percentage? What is 2/5 as a decimal? What is the same and what is different in your method?