

# Decimal place value

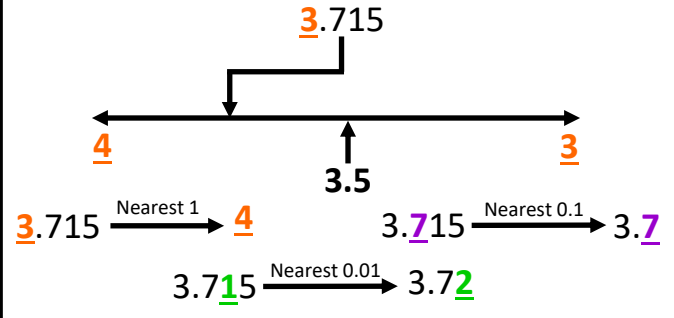
Ones (1s)	Tenths (0.1s)	Hundredths (0.01s)	Thousandths (0.001s)
1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
5	2	6	4

$5.264 = 5 + 0.2 + 0.06 + 0.004$

# Year 5/6 - Decimals and Percentages

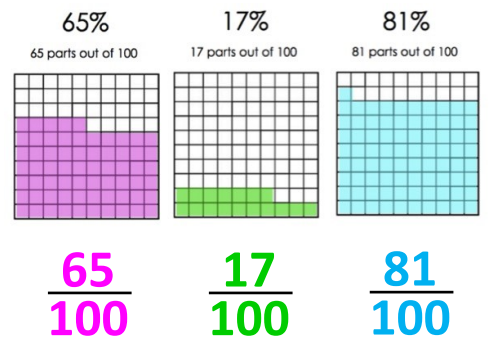
## Rounding decimals

e.g. Rounded to the nearest whole number



## Percentages

Percent means per 100 or /100



## Percentages of amounts

$50\% = \frac{1}{2} = \div 2$        $10\% = \frac{1}{10} = \div 10$   
 $25\% = \frac{1}{4} = \div 4$        $1\% = \frac{1}{100} = \div 100$

Using these rules we can make any percentage, e.g.

$5\% = 10\% \div 2$  or  $1\% \times 5$

$40\% = 10\% \times 4$  or  $50\% - 10\% - 10\%$

$35\% \text{ of } 240 = 72 + 12 = 84$

$10\% \text{ of } 240 = 24$

$30\% \text{ of } 240 = 72$  (x3)  $\div 2$        $5\% \text{ of } 240 = 12$

An easier way? (Particularly for tricky percentages)

We know percentages are easy to turn to /100

$35\% \text{ of } 240 = 35/100 \text{ of } 240$

$240 \times 35 = 8,400$        $8,400 \div 100 = 84$

$35\% \text{ of } 240 = 84$

## Ordering decimals

START with the digits with the most value.  $5.53 < 6.09$

If the digits are the same move to the next.  $7.781 > 7.769$

Remember to check the column value  $3.7 > 3.302$

## Decimals and fractions

$\frac{1}{10} = 0.1$        $\frac{1}{100} = 0.01$        $\frac{1}{1000} = 0.001$

$0.35 = \frac{3}{10} + \frac{5}{100} = \frac{35}{100}$

$0.741 = \frac{7}{10} + \frac{4}{100} + \frac{1}{1000} = \frac{741}{1000}$

$\frac{100}{100} = 100\%$        $\frac{1}{100} = 1\%$        $\frac{37}{100} = 37\%$

Common fraction, decimal, % equivalencies

$\frac{1}{10} = 0.1 = 10\%$        $\frac{3}{4} = 0.75 = 75\%$

$\frac{1}{2} = 0.5 = 50\%$        $\frac{1}{5} = 0.2 = 20\%$

$\frac{1}{4} = 0.25 = 25\%$        $\frac{1}{8} = 0.125 = 12.5\%$

## Multiplying Decimals

$$\begin{array}{r} \text{£}5.53 \\ \times 6 \\ \hline \text{£}33.18 \end{array}$$

Decimal point stays where it is

## Dividing Decimals

$$6 \overline{) \text{£}0.63} \\ \underline{6 \phantom{00}} \\ \text{£}3.78$$

Decimal point stays where it is