Decimals - Year 6

Key vocabulary

Decimal	A number that has a decimal point followed by digits that show a value smaller than one.
Remainder	An amount left over after division (happens when the first number does not divide exactly by the other).
Place Value	The value of where a digit is in the number.
Tenths	One part in ten equal parts 1/10
Hundreths	One part in a hundred equal parts 1/100
Thousandths	One part in a thousand equal parts 1/1000
Equivalent Fraction	Fractions which have the same value, even though they may look different.
Interger	A number with no fractional part (no decimals).

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

$3 + \frac{4}{10} + \frac{2}{100} + \frac{6}{1000}$ ⟵ **3.426** ⟶ $3 + 0.4 + 0.02 + 0.006$

Fractions to Decimals

To convert a fraction to a decimal you looking to see if the number is a factor of 100. If so you can multiply your denominator to get to 100 and do the same to numerator.

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

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

When the denominator is not a factor of 100 , you need to divide the numerator by the denominator using the short division method.

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

Multiplying and Dividing Decimals by 10,100 and 1000

When multiplying decimals you need to follow ones key rule

- The decimal point does not move

When multiplying all of the digits move to the left.

- By 10 - move one place value column to the left
- By 100 - move two places value columns to the left
- By 1000 - move three places value columns to the left

When dividing all of the digits move to the right:

- By 10 - move one place value column to the right
- By 100 - move two places value columns to the right
- By 1000 - move three places value columns to the right

Dividing Decimals by Integers

$8.12 \div 4 = 2.03$

Multiplying Decimals by Integers

$3.45 \times 3 = 10.35$