

Foundation Check In - 2.02 Decimal fractions

Do not use a calculator.

Work out the following, showing all your working.

- $2.4 + 1.07 - 3.5$
- $1.8 + 6 \times ^{-}1.8$
- $\frac{1}{5} + 0.15$
Give your answer as a decimal.
- $6.2 \div 0.02$
- Express 0.044 as a fraction in its simplest form.
- Show that $\frac{5}{12} = 0.41666\dots$
- Chris bought 5 pens and paid £2.
He worked out the cost of a pen as $2 \div 5$ and gave the answer as 0.4p each.
Explain what is wrong with his answer.
- On each of 5 days, the midnight temperatures in a town were -1.3°C , 2°C , -2.5°C , 0.8°C and 1.4°C . Show that the average temperature is 0.08°C .
- Jenna buys 3 pens and 2 erasers. She pays with a £5 note and receives 25p change.
Each pen cost 2.5 times as much as an eraser.
Find the cost of a pen and the cost of an eraser.
- Find the area of the triangle with the vertices plotted on a one centimetre coordinate grid at $(-1.2, 0)$, $(3.1, 0)$ and $(2.4, 1.4)$.

Extension (You are allowed to use a calculator)

Use each of the digits 0, 2, and 5 **once only** and no other digits to write two numbers A and B where both A and B are greater than 0. For example $A = [0].05$ and $B = 2$.

(NB: The zero to the left of the decimal point does not count.)

The answer to $A \div B$ must be as small as possible.

Find A and B and show that this gives the smallest possible answer.

Explain the method you used to answer this problem and then apply this method to some other digits.



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AO1	2	Use order of operations when calculating with decimals, including negative decimals			
AO1	3	Add a fraction to a decimal			
AO1	4	Divide a decimal by a decimal			
AO1	5	Express a terminating decimal as a fraction			
AO2	6	Use division to convert a simple fraction to a decimal			
AO2	7	Use place value when calculating with monetary decimal values			
AO2	8	Calculate the mean using decimal data values			
AO3	9	Solve a contextual problem involving decimals			
AO3	10	Solve a geometric problem involving decimals			

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