

Day 4 Starter

Year 6 | Week 2 | Day 5

1) What is 0.7×13 ?

2) 1 whole is equal to how many tenths?

3) Work out $\frac{1}{5} \times 4$

4) Work out $\pounds 12.30 + \pounds 1.82$



Day 4 Starter

Year 6 | Week 2 | Day 5

1) What is 0.7×13 ? **9.1**

2) 1 whole is equal to how many tenths? **10**

3) Work out $\frac{1}{5} \times 4$ **$\frac{4}{5}$**

4) Work out $\pounds 12.30 + \pounds 1.82$ **$\pounds 14.12$**



Today is all about rapid reasoning.

The first set of reasoning tasks are aimed at those children who are not very confident with reasoning, have a read through and see what you think.

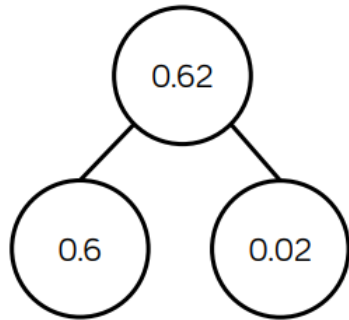
The second set are for those who feel more confident with reasoning in maths.

Remember, reasoning is not just about reaching an answer – it is about **proving, disproving** or **convincing** someone why your answer is correct! Getting the answer is only half the battle!

There is also a Mega Brain Challenge on the final slide for anyone who wants to have a go 😊



Dexter says there is only one way to partition 0.62



Prove Dexter is incorrect by finding at least three different ways of partitioning 0.62

Four children are thinking of four different numbers.

3.454 4.445
4.345 3.54

Teddy: "My number has four hundredths."

Alex: "My number has the same amount of ones, tenths and hundredths."

Dora: "My number has less ones than tenths and hundredths."

Jack: "My number has 2 decimal places."

Match each number to the correct child.

Match each description to the correct number.

My number has the same amount of tens and tenths.

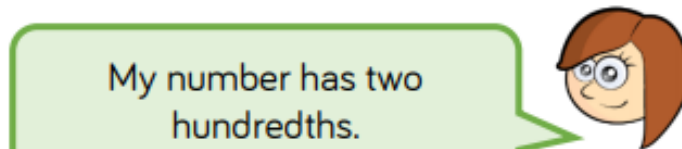


Teddy



Amir

My number has one decimal place.



Rosie

My number has two hundredths.



Eva

My number has six tenths.

46.2

2.64

46.02

40.46

Dora says,



When you multiply by 100, you should add two zeros.

Do you agree?
Explain your thinking.

Tommy says,



The more decimal places a number has, the smaller the number is.

Do you agree?
Explain why.

$$0.62 = 0.12 + 0.5$$

$$0.62 = 0.4 + 0.22$$

$$0.62 = 0.3 + 0.32$$

$$0.62 = 0.42 + 0.2$$

$$0.62 = 0.1 + 0.52$$

$$0.62 = 0.03 + 0.59$$

etc.

Teddy: 4.345

Alex: 4.445

Dora: 3.454

Jack: 3.54

Teddy - 40.46

Amir - 46.2

Rosie - 46.02

Eva - 2.64

Possible answer:

I do not agree with this as the number 4.39 is smaller than the number 4.465, which has more decimal places.

Children should explain that when you multiply by 100 the digits move two places to the left.

For example:
 $0.34 \times 100 = 0.3400$ is incorrect as 0.34 is the same as 0.3400

Also:
 $0.34 + 0 + 0 = 0.34$

Chocolate eggs can be bought in packs of 1, 6 or 8
What is the cheapest way for Dexter to buy 25 chocolate eggs?



Rosie is saving her pocket money. Her mum says,

“Whatever you save, I will give you five times the amount.”

If Rosie saves £2.23, how much will her mum give her?
If Rosie saves £7.76, how much will her mum give her? How much will she have altogether?

Whitney says,

When you multiply a number with 2 decimal places by an integer, the answer will always have more than 2 decimal places.



Do you agree?
Explain why.

Eva says,

When you divide by 10, 100 or 1,000 you just take away the zeros or move the decimal point.



Do you agree?
Explain why.

Jack and Rosie are both calculating the answer to $147 \div 4$

Jack says,

The answer is 36 remainder 3



Rosie says,

The answer is 36.75



Who do you agree with?

Fill in the missing numbers in these calculations

$32.4 \times \square = 324$

$1.562 \times 1,000 = \square$

$\square \times 100 = 208$

$4.3 \times \square = 86$

£11.92

He should buy four packs of 6 plus an individual egg.

£11.15

£38.80

£46.56 altogether (£38.80 + £7.76)

Possible answer:

I do not agree because there are examples such as 2.23×2 that gives an answer with only two decimal places.

X10

2.08

1,562

20

Eva is wrong, the decimal point never moves. When dividing, the digits move right along the place value columns.

Possible examples to prove Eva wrong:

$$24 \div 10 = 2.4$$

$$107 \div 10 = 10.7$$

This shows that you cannot just remove a zero from the number

They are both correct.

Rosie has divided her remainder of 3 by 4 to get 0.75 whereas Jack has recorded his as a remainder.

Brain Challenge

$$C \text{ is } \frac{1}{4} \text{ of } A$$
$$B = C + 2$$



Use the clues to complete the division.

$$\begin{array}{r} \text{O} \text{ B B} \\ \text{A} \overline{) \text{C} \text{ B} \text{ C} \text{ 2}} \end{array}$$

Children may try A as 8 and C as 2
but will realise that
this cannot
complete the
whole division.

Therefore A is 4, B
is 3 and C is 1

$$\begin{array}{r} 033 \\ 133 \overline{) 4132} \\ \underline{413} \\ 12 \end{array}$$