

Year 6 Maths Home Learning Resources
Term 5, Week 3

Session 2: Multiplying by 10, 100 and 1000

Can you explain it?



Colin says that $5.62 \times 100 = 500.62$

Coco says that $5.62 \times 10 = 5.620$



They are both incorrect; explain why for each one.

(He is incorrect because he thought The correct answer is He should have)

Colin is incorrect because he only made the ones digit 100 times bigger, not the tenths or the hundredths digits. The correct answer is 562; he should have made each digit 100 times bigger by moving them two places to the left on the place value chart.

Coco is incorrect because she has placed a zero at the end of the number to multiply by 10 – this only works if you are multiplying an integer by 10; in this case, the value of the digits hasn't increased. The correct answer is 56.2. She should have made each digit 10 times bigger by moving them one place to the left on the place value chart.

Can you apply it?



Find the missing numbers:

How many different solutions can you find by filling in the missing digits? Can you use any digits? What do you notice?

Possible solution:

$$0.2 \times 100 = 0.02 \times 1000$$

$$1.501 \times 100 = 15.01 \times 10$$

$$37.6 \times 1000 = 376 \times 100$$

$$0.242 \times 100 = 0.0242 \times 10 \times 10 \times 10$$

Create your own problem:

Can you make your own missing digit problem for someone in your family to solve?

Solve a Problem:

Coco is building a $\frac{1}{10}$ scale model of her garden. In the model, she has created a pond with a diameter of 15.5cm. What is the diameter of the real pond?

$$15.5 \times 10 = 155 \text{ cm or } 1.55 \text{ m}$$

Is it Always, Sometimes or Never True:

Try some examples to prove whether the statement is always, sometimes or never true. You need to have several examples to be truly convincing.

"To multiply by 10, you just place a zero."

Sometimes true:

You can place a zero at the end of an integer to multiply by 10: $47 \times 10 = 470$

With decimals, placing a zero at the end doesn't change the value $4.7 = 4.70$

