Discussion Problems
Step 11: Multiply by 10, 100 and 1,000

National Curriculum Objectives:

Mathematics Year 5: (5C6b) Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

About this resource:

This resource has been designed for pupils who understand the concepts within this step. It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More Year 5 Decimals resources.

Did you like this resource? Don't forget to review it on our website.

Multiply by 10, 100 and 1,000

1. Look at the function cards below.

Investigate which numbers you could start with in order to get as close as possible to 473.64. Your starting numbers must have 3 decimal places and an odd number of thousandths.

x 10	x 1,000	– 1.208	x 100	+ 0.75

You must use at least two multiplications and a subtraction or addition in your answer and can use all of the cards multiple times.

DP

2. Kieron is trying to demonstrate that when multiplying something by 10, 100 and 1,000, the quantity of something increases.

He has chosen to draw sand to show this:

3.12g of sand

31.2g of sand

312g of sand

3,120g of sand

Explore other ways you could show this with different decimal numbers and drawings.

DP

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Various possible answers, for example:

5.439 – 1.208 = 4.231; 4.231 + 0.75 = 4.981; 4.981 x 10 = 49.81; 49.81 – 1.208 = 48.602; 48.602 – 1.208 = 47.394; 47.394 x 10 = 473.94

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Various answers possible including:

Children could use various pictorial representations such as water and multiply the number of millilitres: 2.74ml, 27.4ml, 274ml and 2,740ml of water.

DP