

Discussion Problems

Step 1: Adding Decimals within 1

National Curriculum Objectives:

Mathematics Year 5: (5F10) [Solve problems involving number up to 3dp.](#)

Mathematics Year 5: (5M9a) [Use all four operations to solve problems involving measure \[for example, length, mass, volume, money\] using decimal notation, including scaling.](#)

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.

Adding Decimals within 1

1. Two factories produce chocolate biscuits. Their output for the year is listed below. Complete the missing values in the table.

	Factory 1	Factory 2
April – June	0.345m	278,000
July – September	197,000	0.113m
October – December	143,000	178,000
January – March	0.224m	0.419m
Total	m	m

What questions can you ask about this information? Find the answers to your questions in decimals.

DP

2. If the calculation below includes one exchange, how many counters do you need to complete it? How many different ways can you complete it?

If the calculation below includes two exchanges, how many counters do you need to complete it? How many different ways can you complete it?

	Ones	tenths	hundredths	thousandths
		•		
+		•		
		•	● ● ● ●	● ● ● ● ● ●

DP

Adding Decimals within 1

1. Two factories produce chocolate biscuits. Their output for the year is listed below. Complete the missing values in the table.

	Factory 1	Factory 2
April – June	0.345m	278,000
July – September	197,000	0.113m
October – December	143,000	178,000
January – March	0.224m	0.419m
Total	0.909m	0.988m

What questions can you ask about this information? Find the answers to your questions in decimals.

Various answers, for example:

How many biscuits were made between October and March in Factory 2? 0.597m

Which factory made the most biscuits between April and September? Factory 1: 0.542m.

DP

2. If the calculation below includes one exchange, how many counters do you need to complete it? How many different ways can you complete it?

You will always need 20 counters for one exchange. Children may prove this in various ways, for example:

	Ones	tenths	hundredths	thousandths
		•	••••	••
+		••	•••••	••

If the calculation below includes two exchanges, how many counters do you need to complete it? How many different ways can you complete it?

You will always need 29 counters for two exchanges. Children may prove this in various ways, for example:

	Ones	tenths	hundredths	thousandths
		•••	•••••	••••
+		•	••••	•••••

DP