

Reasoning and Problem Solving

Step 3: Divide By 10

National Curriculum Objectives:

Mathematics Year 4: (4C6a) [Recall multiplication and division facts for multiplication tables up to \$12 \times 12\$](#)

Mathematics Year 4: (4C6b) [Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Identify and explain whether a statement involving the division of a multiple of 10 (up to 100) by 10 is correct. Use Base 10 or PV counters as a visual resource.

Expected Identify and explain whether a statement involving the division of a multiple of 10 (up to 990) by 10 is correct. Use Base 10 or PV counters as a visual resource.

Greater Depth Identify and explain whether a statement involving the division of a multiple of 10 (up to 990) by 10 is correct. Use a mixture of Base 10 and PV counters within a question as a visual aid.

Questions 2, 5 and 8 (Problem Solving)

Developing Answer a time word problem by dividing a multiple of 10 (up to 100) by 10.

Expected Answer a time word problem by dividing a multiple of 10 (up to 990) by 10.

Greater Depth Answer a time word problem, including conversions from hours to minutes, by dividing a multiple of 10 (up to 990) by 10.

Questions 3, 6 and 9 (Problem Solving)

Developing Find the ingredients needed to make a single item by dividing a multiple of 10 (up to 100) by 10.

Expected Find the ingredients needed to make a single item by dividing a multiple of 10 (up to 990) by 10.

Greater Depth Find the ingredients needed to make a single item by dividing a multiple of 10 (up to 990) by 10. Requires knowledge of dividing by 10 with answers that are not whole numbers which may require investigation with manipulatives.

More [Year 4 Multiplication and Division](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Divide By 10

Divide By 10

1a. Harry thinks he has divided 50 by 10.

Tens	Ones
	11 11

Is he correct?

Explain.



R

1b. Ivy thinks she has divided 80 by 10.

Tens	Ones
	8

Is she correct?

Explain.



R

2a. It takes Jayden and Suzy 10 minutes to complete a lap of the park.

Jayden runs for 60 minutes and Suzy runs for 40 minutes.

How many laps of the park do they complete altogether?



PS

2b. It takes Joe and Fatima 10 minutes to each complete a puzzle.

Joe works for 20 minutes and Fatima works for 70 minutes.

How many puzzles will they complete altogether?



PS

3a. A recipe makes 10 smoothies. The ingredients needed are:

- 90g strawberries
20g blueberries
80ml orange juice

How much of each ingredient will be needed to make 1 smoothie?



PS

3b. A recipe makes 10 drinks. The ingredients needed are:

- 40ml orange juice
60ml lemon juice
50ml pineapple juice

How much of each ingredient will be needed to make 1 drink?

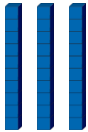


PS

Divide By 10

Divide By 10

4a. Kelly thinks she has divided 350 by 10.

H	T	O
		

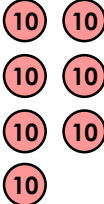
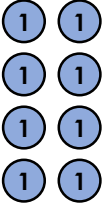
Is she correct?

Explain.



R

4b. Trent thinks he has divided 870 by 10.

H	T	O
		

Is he correct?

Explain.



R

5a. Dr Smith and Dr Li are working in the surgery today and they take 10 minutes to see each patient.

Dr Smith works for 300 minutes and Dr Li works for 390 minutes.

How many patients do they see altogether?



PS

5b. Ann and Tommy are reading their books in the library and they take 10 minutes to read each chapter.

Ann reads for 130 minutes and Tommy reads for 210 minutes.

How many chapters will they read altogether?



PS

6a. A recipe makes 10 cupcakes.
The ingredients needed are:

370g flour
250g butter
200g sugar
130g cocoa powder
420g buttercream

How much of each ingredient is needed to make 1 cupcake?



PS

6b. A pie recipe serves 10 people.
The ingredients needed are:

420g pastry mix
110ml water
390ml stock
250g chopped onion
560g minced beef

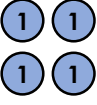
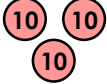
How much of each ingredient is needed to make enough pie for 1 person?



PS

Divide By 10

7a. Izzy thinks she has divided 670 by 10.

H	T	O
		 
		

Is she correct?

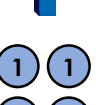
Explain.



R

Divide By 10

7b. Mikai thinks he has divided 290 by 10.

H	T	O
		 
		

Is he correct?

Explain.



R

8a. Mr Done and Miss Chung are meeting with parents this week and each appointment lasts for 10 minutes.

Mr Done spends 4 hours in appointments and Miss Chung spends 5 hours.

How many parents do they see altogether?



PS

8b. Jake and Miah are both colouring pictures in their books and each take 10 minutes to colour in a whole picture.

Jake colours for 4 hours and Miah colours for 2 hours.

How many pictures will they manage to colour altogether?



PS

9a. A recipe makes 10 cookies. The ingredients needed are:

460g flour
150g margarine
100g sugar
240g chocolate chips
25ml milk

How much of each ingredient will be needed to make 1 cookie?



PS

9b. A cake recipe produces 10 slices. The ingredients needed are:

330g flour
89g sugar
990g margarine
100g lemon zest
250ml milk

How much of each ingredient will be used for 1 slice?



PS

Reasoning and Problem Solving

Divide By 10

Developing

- 1a. Harry is incorrect because he has shown $40 \div 10 = 4$, not $50 \div 10 = 5$.
2a. Jayden: $60 \div 10 = 6$; Suzy: $40 \div 10 = 4$; $6 + 4 = 10$ laps altogether.
3a. 9g strawberries, 2g blueberries, 8ml orange juice

Expected

- 4a. Kelly is correct as $350 \div 10 = 35$.
5a. Dr Smith: $300 \div 10 = 30$;
Dr Li: $390 \div 10 = 39$;
 $30 + 39 = 69$ appointments altogether.
6a. 37g flour, 25g butter, 20g sugar, 13g cocoa powder, 42g buttercream

Greater Depth

- 7a. Izzy is correct as $670 \div 10 = 67$
8a. Mr Done: 4 hrs = 240mins, $240 \div 10 = 24$;
Miss Chung: 5 hrs = 300 mins, $300 \div 10 = 30$; $24 + 30 = 54$ parents
9a. 46g flour, 15g margarine, 10g sugar, 24g chocolate chips, 2.5ml milk (this may be displayed or explained in different ways by children)

Reasoning and Problem Solving

Divide By 10

Developing

- 1b. Ivy is correct as $80 \div 10 = 8$.
2b. Joe: $20 \div 10 = 2$; Fatima: $70 \div 10 = 7$; $2 + 7 = 9$ puzzles altogether.
3b. 4ml orange juice, 6ml lemon juice, 5ml pineapple juice

Expected

- 4b. Trent is incorrect because he has shown $780 \div 10 = 78$ instead of $870 \div 10 = 87$.
5b. Ann $130 \div 10 = 13$;
Tommy $210 \div 10 = 21$;
 $13 + 21 = 34$ chapters altogether.
6b. 42g pastry mix, 11ml water, 39ml stock, 25g onions, 56g minced beef

Greater Depth

- 7b. Mikai is incorrect as $290 \div 10 = 29$ but he's shown 39
8b. Jake: 4hrs = 240 mins, $24 \div 10 = 24$;
Miah: 2hrs = 120 mins, $120 \div 10 = 12$;
 $24 + 12 = 36$ pictures altogether
9b. 33g flour, 8.9g sugar (this may be displayed or explained in different ways by children), 99g margarine, 10g lemon zest, 25ml milk