

Reasoning and Problem Solving

Step 6: Divide 4-Digits by 1-Digit

National Curriculum Objectives:

Mathematics Year 5: (5C7b) [Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Decide whether a statement is correct when comparing calculations using known division facts from 2, 3 and 5 times tables and explain why.

Expected Decide whether a statement is correct when comparing calculations using known division facts from 4, 6 and 8 times tables and explain why.

Greater Depth Decide whether a statement is correct when comparing calculations using known division facts from 7 and 9 times tables and explain why.

Questions 2, 5 and 8 (Reasoning)

Developing Explain errors in a calculation method with up to one error using known division facts from 2, 3 and 5 times tables.

Expected Explain errors in a calculation method with up to two errors using known division facts from 4, 6 and 8 times tables.

Greater Depth Explain errors in a calculation method with up to three errors using known division facts from 7 and 9 times tables.

Questions 3, 6 and 9 (Problem Solving)

Developing Solve word problems using known division facts from 2, 3 and 5 times tables.

Expected Solve word problems using known division facts from 4, 6 and 8 times tables.

Greater Depth Solve word problems using known division facts from 7 and 9 times tables.

[More resources](#) which follow the same small steps as White Rose.

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

Divide 4-Digits by 1-Digit

Divide 4-Digits by 1 Digit

1a. Isabel is comparing two calculations.

She writes:

$$3,123 \div 3 > 4,525 \div 5$$

Is she correct? Explain how you know.



R

1b. Kelly is comparing two calculations.

She writes:

$$2,124 \div 2 < 5,535 \div 5$$

Is she correct? Explain how you know.



R

2a. Kate completes the following calculation.

$$\begin{array}{r} 1 \quad 1 \quad 1 \quad 0 \\ 5 \overline{) 8 \quad 5 \quad 5 \quad 0} \end{array}$$

Explain her mistake.
Calculate the correct answer.



R

2b. Johnny completes the following calculation.

$$\begin{array}{r} 2 \quad 1 \quad 0 \quad 0 \\ 3 \overline{) 6 \quad 3 \quad 1 \quad 2} \end{array}$$

Explain his mistake.
Calculate the correct answer.



R

3a. Rulers come in packs of 5. A box contains 2,505 rulers. How many packs are there in a box?
Show your method.



PS

3b. Ice lollies come in boxes of 3. A crate contains 1,269 ice lollies. How many boxes are there in a crate?
Show your method.



PS

Divide 4-Digits by 1-Digit

Divide 4-Digits by 1 Digit

4a. Belle is comparing two calculations.

She writes:

$$2,136 \div 8 > 2,526 \div 6$$

Is she correct? Explain how you know.



R

4b. Alice is comparing two calculations.

She writes:

$$3,288 \div 8 > 2,424 \div 6$$

Is she correct? Explain how you know.



R

5a. Ben completes the following calculation.

$$\begin{array}{r} 2011 \\ 4 \overline{) 8244} \end{array}$$

Explain his mistake.
Calculate the correct answer.



R

5b. Josh completes the following calculation.

$$\begin{array}{r} 1011 \\ 6 \overline{) 8466} \end{array}$$

Explain his mistake.
Calculate the correct answer.



R

6a. Balloons come in packets of 8. A box contains 2,112 balloons. How many packets are there in a box?
Show your method.



PS

6b. Cereal bars come in boxes of 6. A crate contains 1,440 cereal bars. How many boxes are there in a crate?
Show your method.



PS

Divide 4-Digits by 1-Digit

Divide 4-Digits by 1 Digit

7a. Lucy is comparing two calculations.

She writes:

$$2,214 \div 9 > 2,247 \div 7$$

Is she correct? Explain how you know.



R

7b. Sinead is comparing two calculations.

She writes:

$$4,606 \div 7 > 6,795 \div 9$$

Is she correct? Explain how you know.



R

8a. Freddie completes the following calculation.

$$\begin{array}{r} 1011 \\ 9 \overline{) 9459} \end{array}$$

Explain his mistake.
Calculate the correct answer.



R

8b. Theo completes the following calculation.

$$\begin{array}{r} 1001 \\ 7 \overline{) 8407} \end{array}$$

Explain his mistake.
Calculate the correct answer.



R

9a. Cupcakes come in trays of 9. A box contains 1,125 cupcakes. How many trays are there in a box?
Show your method.



PS

9b. Cookies come in packets of 7. A box contains 1,750 cookies. How many packets are there in a box?
Show your method.



PS

Reasoning and Problem Solving Divide 4-Digits by 1-Digit

Developing

- 1a. She is correct. $1,041 > 905$
2a. She did not exchange the remaining 3 thousands into 30 hundreds. The correct answer is 1,710.
3a. 501 packs

Expected

- 4a. She is incorrect. $267 < 421$
5a. He did not exchange the 2 hundreds into 20 tens. The correct answer is 2,061.
6a. 264 packets

Greater Depth

- 7a. She is incorrect. $246 < 321$
8a. He did not exchange the 4 hundreds into 40 tens. The correct answer is 1,051.
9a. 125 trays

Reasoning and Problem Solving Divide 4-Digits by 1-Digit

Developing

- 1b. She is correct. $1,062 < 1,107$
2b. He did not exchange the 1 ten into 10 ones. The correct answer is 2,104.
3b. 423 boxes

Expected

- 4b. She is correct. $411 > 404$
5b. He did not exchange the remaining 2 thousands into 20 hundreds. The correct answer is 1,411.
6b. 240 boxes

Greater Depth

- 7b. She is incorrect. $658 < 755$
8b. He did not exchange the remaining 1 thousand into 10 hundreds. The correct answer is 1,201.
9b. 250 packets