

Reasoning and Problem Solving

Step 9: Divide 2 Digits by 1 Digit 2

National Curriculum Objectives:

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

Mathematics Year 4: (4C8) [Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as \$n\$ objects are connected to \$m\$ objects](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Solve a one-step problem using division of 2 digits by 1 digit. Pictorial support, no exchanges and remainders used.

Expected Solve a one-step problem using division of 2 digits by 1 digit. Some pictorial support, some exchanges and remainders used.

Greater Depth Solve a two-step problem using addition and division of 2 digits by 1 digit. No pictorial support, with exchange and remainders used.

Questions 2, 5 and 8 (Reasoning)

Developing Identify and explain errors when dividing 2 digits by 1 digit. Pictorial support, no exchanges and remainders used.

Expected Identify and explain errors when dividing 2 digits by 1 digit. Some pictorial support, some exchanges and remainders used.

Greater Depth Identify and explain errors when dividing 2 digits by 1 digit. Limited pictorial support to structure reasoning, with exchanges and remainders used.

Questions 3, 6 and 9 (Problem Solving)

Developing Identify numbers with a remainder when dividing 2 digits by 1 digit. Pictorial support and remainders used.

Expected Identify calculations with a remainder greater than a given number when dividing 2 digits by 1 digit. Some pictorial support, some exchanges and remainders used.

Greater Depth Order calculations by their number of remainders when dividing 2 digits by 1 digit. No pictorial support, with exchanges and remainders used.

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

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

Divide 2 Digits by 1 Digit 2

Divide 2 Digits by 1 Digit 2

1a. Sophie has 49 pens. She shares them equally between 4 pen pots. She says,



I think each pen pot will get 13 pens and 1 will be left over.



Is Sophie correct? Explain your answer.

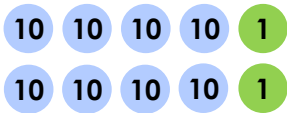


R

1b. Jack has 82 building blocks. He shares them equally between 8 friends. He says,



I think each friend will get 9 blocks and 3 will be left over.



Is Jack correct? Explain your answer.



R

2a. Blake is using place value counters to solve the calculation $63 \div 6$.

Tens	Ones
10	1
10	1
10	1
10	
10	
10	

Blake says the answer is 11 r1. Explain her mistake.



R

2b. Brooke is using place value counters to solve the calculation $47 \div 4$.

Tens	Ones
10	1 1
10	1 1
10	1 1
10	1

Brooke says the answer is 12 r1. Explain her mistake.



R

3a. Divide the following number by the numbers on the digit cards.

86



2 4 8

Which calculations give a remainder?



PS

3b. Divide the following number by the numbers on the digit cards.

65



2 6 3

Which calculations give a remainder?



PS

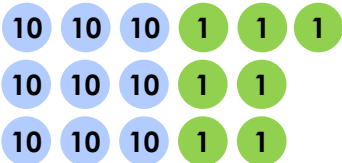
Divide 2 Digits by 1 Digit 2

Divide 2 Digits by 1 Digit 2

4a. When Lily, Jakub and Adil put all their stickers together, they have 97 in total. They share them equally between 7 sticker books. Adil says,



I think each sticker book will get 14 stickers and 4 will be left over.



Is Adil correct? Explain your answer.

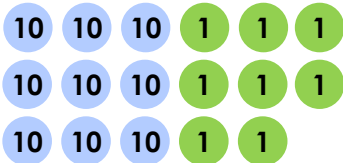


R

4b. When Abdul, Jan and Anna put all their football cards together, they have 98 in total. They share them equally between 8 piles. Anna says,



I think each pile 13 cards in it and 3 will be left over.

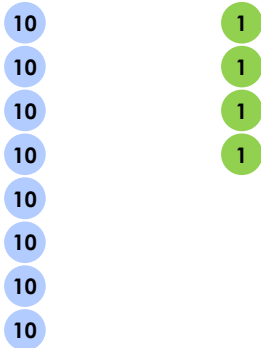


Is Anna correct? Explain your answer.



R

5a. Joe is using place value counters to solve the calculation $84 \div 8$.

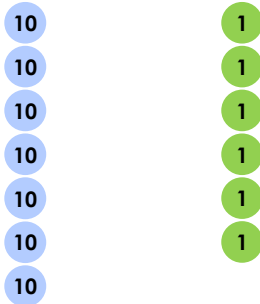


Joe says the answer is 11. Explain his mistake.



R

5b. Ruby is using place value counters to solve the calculation $76 \div 6$.



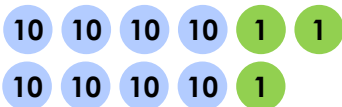
Ruby says the answer is 11 r10. Explain her mistake.



R

6a. Divide the following number by the numbers on the digit cards.

83



Which calculations give a remainder greater than 4?



PS

6b. Divide the following number by the numbers on the digit cards.

76



Which calculations give a remainder greater than 3?



PS

Divide 2 Digits by 1 Digit 2

Divide 2 Digits by 1 Digit 2

7a. Annabel has 53 marbles, Lily has 28 and Jakub has 18. They combine their marbles and share them equally between 7 toy boxes. Annabel says,



I think each toy box will get 12 marbles and 1 will be left over.

Is Annabel correct? Explain your answer.



R

7b. James has 48 pencils, Lucy has 35 and Filip has 14. They combine all their pencils and share them equally between 9 pencil cases. Filip says,



I think each pencil case will have 11 pencils and 2 will be left over.

Is Filip correct? Explain your answer.



R

8a. Maria is using place value counters to solve the calculation $94 \div 7$.

Maria says the answer is 13 r5. Complete the table and explain her mistake.



R

8b. Finley is using place value counters to solve the calculation $80 \div 6$.

Finley says the answer is 13 r3. Complete the table and explain his mistake.



R

9a. Divide the following number by the numbers on the digit cards.

95

6	9	7	8	4
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Order the calculations in ascending order by the size of their remainders.



PS

9b. Divide the following number by the numbers on the digit cards.

87

6	8	7	9	4
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Order the calculations in descending order by the size of their remainders.



PS

Reasoning and Problem Solving

Divide 2 Digits by 1 Digit 2

Developing

- 1a. Sophie is incorrect because if each of the 4 people gets 13, she will need at least 52 pens; $49 \div 4 = 12 \text{ r}1$.
- 2a. Blake has put the remainders in the ones column. The correct answer is 10 r3.
- 3a. $86 \div 8 = 10 \text{ r}6$; $87 \div 4 = 21 \text{ r}2$

Expected

- 4a. Adil is incorrect because if you share 97 between 7 people, each person would get 13 and there would be a remainder of 6.
- 5a. Joe has not shared equally. The correct answer is 10 r4.
- 6a. $83 \div 6 = 13 \text{ r}5$; $83 \div 7 = 11 \text{ r}6$

Greater Depth

- 7a. Annabel is incorrect because $53 + 28 + 18 = 99$, $99 \div 7 = 14 \text{ r}1$. Annabel would still have 14 marbles left to share.
- 8a. The correct answer is 13 r3. Table should show 13 in each row and 3 outside the table.
- 9a. $95 \div 4 = 23 \text{ r}3$; $95 \div 7 = 13 \text{ r}4$; $95 \div 9 = 10 \text{ r}5$; $95 \div 6 = 15 \text{ r}5$; $95 \div 8 = 11 \text{ r}7$

Reasoning and Problem Solving

Divide 2 Digits by 1 Digit 2

Developing

- 1b. Jack is incorrect because he has only used 75 of the blocks; $82 \div 8 = 10 \text{ r}2$.
- 2b. Brooke has not shared the ones equally. The correct answer is 11 r3.
- 3b. $65 \div 2 = 32 \text{ r}1$; $65 \div 6 = 10 \text{ r}5$; $65 \div 3 = 21 \text{ r}2$

Expected

- 4b. Anna is incorrect because she does not have enough football cards for everyone to receive 12; $98 \div 8 = 12 \text{ r}2$.
- 5b. Ruby has left 1 ten as a remainder, but she should have exchanged 1 ten for 10 ones. The correct answer is 12 r4.
- 6b. $76 \div 6 = 12 \text{ r}4$; $76 \div 7 = 10 \text{ r}6$

Greater Depth

- 7b. Filip is incorrect because he doesn't have enough pencils for everyone to receive 11; $48 + 35 + 14 = 97$, $97 \div 9 = 10 \text{ r}7$.
- 8b. The correct answer is 13 r2. Table should show 13 in each row and 2 outside the table.
- 9b. $87 \div 8 = 10 \text{ r}7$; $87 \div 9 = 9 \text{ r}6$; $87 \div 4 = 21 \text{ r}3$; $87 \div 6 = 14 \text{ r}3$; $87 \div 7 = 12 \text{ r}3$