Reasoning and Problem Solving
Step 10: Divide 3 Digits by 1 Digit

National Curriculum Objectives:

Mathematics Year 4: (4C6a) Recall multiplication and division facts for multiplication tables up to 12 × 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 (Problem Solving)
Developing Find the missing numbers when dividing 3 digits by 1 digit using pictorial support. Some remainders and no exchanging.
Expected Find the missing numbers when dividing 3 digits by 1 digit using some pictorial support. Some exchanging and some remainders.
Greater Depth Find the missing numbers when dividing 3 digits by 1 digit without pictorial support. With exchanging and remainders.

Questions 2, 5 and 8 (Problem Solving)
Developing Complete the place value chart to solve the calculation. Some remainders and no exchanging.
Expected Use the counters to complete the calculation. Some exchanging and some remainders.
Greater Depth Use the counters to find two solutions to the calculations. With exchanging and remainders.

Questions 3, 6 and 9 (Reasoning)
Developing Prove whether a statement is correct by dividing 3 digits by 1 digit using pictorial support. Some remainders and no exchanging.
Expected Prove whether a statement is correct by dividing 3 digits by 1 digit. Some exchanging and some remainders.
Greater Depth Prove whether a statement is correct by dividing 3 digits by 1 digit. With exchanging and remainders.

More Year 4 Multiplication and Division resources.

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

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Divide 3 Digits by 1 Digit

Divide 3 Digits by 1 Digit

1a. Max has spilt paint all over his maths homework!

He used the place value chart below.

881 ÷ 🟠 = 🟠

H	T	O

1

What could his equation have been?

⭐D

PS

1b. Ava's pen has leaked all over her maths homework!

She used the place value chart below.

808 ÷ 🔵 = 🔵🔵

H	T	O

What could her equation have been?

⭐D

PS

2a. Complete the place value chart to find the missing digits.

☐☐3 ÷ 3 = ☐☐☐

H	T	O
100 100 100		
	10 10	

⭐D

PS

2b. Complete the place value chart to find the missing digits.

☐2☐ ÷ 2 = ☐☐☐ r ☐

H	T	O
100 100		
		1

1

⭐D

PS

3a. Jay says,
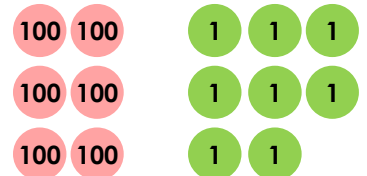
> I can divide five hundred and fifty-five equally by 5.

100 100 10 10 1 1
100 100 10 10 1 1
100 10 1

Is he correct? Convince me.

⭐D
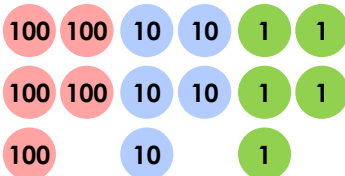
R

3b. Tayyeba says,

> Six hundred and eight can be divided equally by 2 and 3.

100 100 1 1 1
100 100 1 1 1
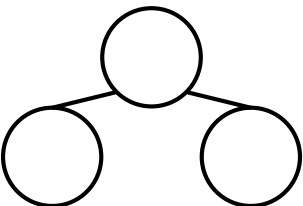100 100 1 1

Is she correct? Convince me.

⭐D

R

Divide 3 Digits by 1 Digit

Divide 3 Digits by 1 Digit

4a. Josh's pen has leaked all over his maths homework!

He divided 654 by a 1-digit number and his answer is a whole number greater than 200.
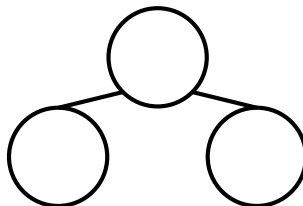
654 ÷ ✶ = ✶

What could his equation have been?

4b. Tara has spilt tomato soup all over her maths homework!

She divided 846 by a 1-digit number and her answer is a whole number less than 300.
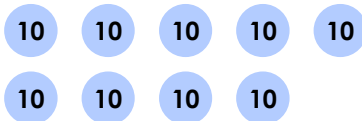
846 ÷ ✶ = ✶

What could her equation have been?

5a. Use the tens counters to correctly complete the calculation. All counters must be used once.

$$6 \,\square\, 5 \div 3 = 2 \,\square\, 5$$

(10) (10) (10) (10) (10)
(10) (10) (10) (10)

5b. Use the ones counters to correctly complete the calculation. All counters must be used once.

$$6\,3\,\square \div 9 = 7 \,\square\, r \,\square$$

(1) (1) (1) (1)

6a. Mary says,

> Four hundred and fifty-nine divided by nine equals fifty-one remainder two.

Is she correct? Convince me.

6b. Gareth says,

> I can divide seven hundred and twenty-eight equally by 2 and 4.

Is he correct? Convince me.

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Reasoning and Problem Solving – Divide 3 Digits by 1 Digit – Year 4 Expected

7a. Megan has spilt paint all over her maths homework!

She divided 579 by a 1-digit number, and her answer had a remainder of 3.

579 ÷ 🟠 = 🟠

What could her equation have been?

PS

7b. Ben's pen leaked all over his maths homework!

He divided 316 by a 1-digit number, and his answer had a remainder less than 2.

316 ÷ 🔵 = 🔵

What could his equation have been?

PS

8a. Use the ones counters to correctly complete the calculation. All counters must be used once and one digit may be 0.

$$6\ 5\ \boxed{} \div 7 = 9\ \boxed{}\ r\ \boxed{}$$
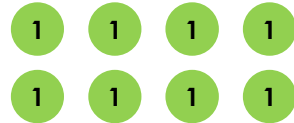
①①①①
①①①①

Find two solutions.

PS

8b. Use the ones counters to correctly complete the calculation. All counters must be used once and one digit may be 0.

$$7\ 8\ \boxed{} \div 3 = 2\ 6\ \boxed{}\ r\ \boxed{}$$

①①①①
①①①①

Find two solutions.

PS

9a. Junaid says,

> When I divide six hundred and eighty-eight by 7 and 9 both answers have a remainder of two.

Is he correct? Convince me.

R

9b. Jaya says,

> Three hundred and seventy-nine divided by five equals the same as four hundred and fifty-four divided by six.

Is she correct? Convince me.

R

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Reasoning and Problem Solving – Divide 3 Digits by 1 Digit – Year 4 Greater Depth

Reasoning and Problem Solving
Divide 3 Digits by 1 Digit

Developing
1a. 881 ÷ 2 = 440 r1
2a. 963 ÷ 3 = 321
3a. Jay is correct because 555 ÷ 5 = 111.

Expected
4a. 654 ÷ 3 = 218; 654 ÷ 2 = 327;
654 ÷ 1 = 654
5a. 675 ÷ 3 = 225
6a. Mary is incorrect because 459 ÷ 9 = 51
exactly.

Greater Depth
7a. 579 ÷ 4 = 144 r3; 579 ÷ 6 = 96 r3;
579 ÷ 8 = 72 r3; 579 ÷ 9 = 64 r3
8a. 650 ÷ 7 = 92 r6; 653 ÷ 7 = 93 r2
9a. Junaid is incorrect because 688 ÷ 7 =
98 r2 and 688 ÷ 9 = 76 r4.

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Developing
1b. 808 ÷ 4 = 202
2b. 423 ÷ 2 = 211 r1
3b. Tayyeba is incorrect because 608 ÷ 2
= 304 but 608 ÷ 3 = 202 r2.

Expected
4b. 846 ÷ 3 = 282; 846 ÷ 6 = 141;
846 ÷ 9 = 94
5b. 632 ÷ 9 = 70 r2
6b. Gareth is correct because 728 ÷ 2 =
364 and 728 ÷ 4 = 182.

Greater Depth
7b. 316 ÷ 3 = 105 r1; 316 ÷ 5 = 63 r1;
316 ÷ 7 = 45 r1; 316 ÷ 9 = 35 r1
8b. 786 ÷ 3 = 262; 785 ÷ 3 = 261 r2
9b. Jaya is correct as they both equal 75
r4.