Dividing by 10, 100 and 1,000

Dividing by 10, 100 and 1,000

1a. A number divided by 100 equals this:

T Th	Th	H	T	O
		●	●●● ●●	

William says the calculation must have been 1,500 ÷ 100.

Is he correct?
Convince me.

D

R

1b. A number divided by 10 equals this:

T Th	Th	H	T	O
		●●● ●●● ●	●●● ●●● ●●	

Holly says the calculation must have been 7,800 ÷ 10.

Is she correct?
Convince me.

D

R

2a. Gary is completing the calculation below.

54,800 ÷ 100 =

He has shown his answer on the place value chart below.

T Th	Th	H	T	O
	●●● ●●	●●● ●	●●● ●●● ●●	

Explain the mistake that Gary has made.

D

R

2b. Sofia is completing the calculation below.

27,000 ÷ 1,000 =

She has shown her answer on the place value chart below.

T Th	Th	H	T	O
			●●	●●● ●●●

Explain the mistake that Sofia has made.

D

R

3a. Alan is thinking of a five-digit number.

He divides the number by 1,000.

The answer he gets after dividing by 1,000 is less than 60 but greater than 10.

The digits in the number have a sum of 5.

What number did Alan start with?

T Th	Th	H	T	O

D

PS

3b. Mia is thinking of a five-digit number.

She divides the number by 10.

The answer she gets after dividing by 10 is less than 5,000 but greater than 2,000.

The digits in the number have a sum of 6.

What number did Mia start with?

T Th	Th	H	T	O

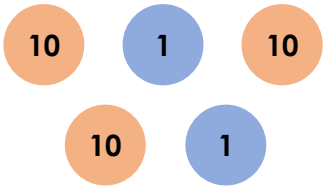
D

PS

Dividing by 10, 100 and 1,000

Dividing by 10, 100 and 1,000

4a. A number divided by 1,000 equals this:

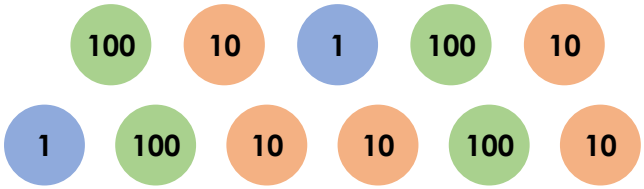


Sinead says the calculation must have been 23,000 ÷ 1,000.

Is she correct?
Convince me.

E R

4b. A number divided by 100 equals this:



Luke says the calculation must have been 45,300 ÷ 100.

Is he correct?
Convince me.

E R

5a. Daniel is completing the calculation below.

62,000 ÷ 100 =

He has shown his answer on the place value chart below.

T Th	Th	H	T	O
			6	2

Explain the mistake that Daniel has made.

E R

5b. Rose is completing the calculation below.

7,400 ÷ 10 =

She has shown her answer on the place value chart below.

T Th	Th	H	T	O
7	4			

Explain the mistake that Rose has made.

E R

6a. Josh is thinking of a five-digit number.

He divides the number by 100.

The answer he gets after dividing by 100 is less than 400 but greater than 200.

The digits in the number have a sum of 7.

What number did Josh start with?

E PS

6b. Alice is thinking of a five-digit number.

She divides the number by 1,000.

The answer she gets after dividing by 1,000 is less than 40 but greater than 10.

The digits in the number have a sum of 9.

What number did Alice start with?

E PS

Dividing by 10, 100 and 1,000

7a. A number divided by 10 then divided by 10 again equals this:

Three tens and thirteen ones

Jenny says the calculation must have been 4,200 ÷ 10 ÷ 10.

Is she correct?
Convince me.

GD

R

Dividing by 10, 100 and 1,000

7b. A number divided by 10 then divided by 10 and divided by 10 again equals this:

Two tens and twelve ones

Angelo says the calculation must have been 31,000 ÷ 10 ÷ 10 ÷ 10.

Is he correct?
Convince me.

GD

R

8a. Leah is converting metres into kilometres.

12,450m ÷ 1,000 =

She has calculated the answer below.

Twelve ones, three tenths and twenty-four hundredths kilometres

Explain the mistake that Leah has made.

GD

R

8b. Dan is converting pence into pounds.

2,740p ÷ 100 =

He has calculated the answer below.

Two pounds and seventy-four pence

Explain the mistake that Dan has made.

GD

R

9a. April is thinking of a five-digit number.

She divides the number by 10 then by 100.

The answer she gets after dividing is less than 80 but greater than 30. It is also odd.

The digits in the number have a sum of 8.

What number did April start with?

GD

PS

9b. Finn is thinking of a five-digit number.

He divides the number by 10 then by 10 again.

The answer he gets after dividing is less than 500 but more than 300. It is also even

The digits in the number have a sum of 9.

What number did Finn start with?

GD

PS

Reasoning and Problem Solving
Dividing by 10, 100 and 1,000

Developing

1a. William is incorrect. The calculation should be 15,000 ÷ 100 because the answer shows 150.

2a. Gary has divided the number by 10 instead of 100. He needs to move the digits one column further. The correct answer is 548 not 5,480.

3a. Various answers, for example: 14,000; 50,000; 32,000

Expected

4a. Sinead is incorrect. The calculation should be 32,000 ÷ 1,000 because the answer shows 32.

5a. Daniel has divided by 1,000 instead of 100. He has moved the digits one column too far. The correct answer is 620 not 62

6a. Various answers, for example: 25,000; 22,300; 30,400

Greater Depth

7a. Jenny is incorrect. The calculation should be 4,300 ÷ 10 ÷ 10 because the answer shows 43.

8a. Leah has swapped the tenths and hundredths around. The correct answer is 2.45km not 2.54km

9a. Various answers, for example: 71,000; 53,000; 35,000

Reasoning and Problem Solving
Dividing by 10, 100 and 1,000

Developing

1b. Holly is correct the calculation is 7,800 ÷ 10 because the answer shows 780.

2b. Sofia has moved the place value counters the three columns to the right to divide by 1,000 but she needs one more ones counter to make the correct answer of 27 not 26.

3b. Various answers, for example: 30,120; 22,200; 32,100

Expected

4b. Luke is incorrect. The calculation should be 45,200 ÷ 100 because the answer shows 452.

5b. Rose has multiplied instead of dividing. She has moved the digits one column to the left and not to the right. The correct answer is 740 not 74,000

6b. Various answers, for example: 27,000; 18,000; 36,000

Greater Depth

7b. Angelo is incorrect. The calculation should be 32,000 ÷ 10 ÷ 10 ÷ 10 because the answer is 32.

8b. Dan has divided the number by 1,000 rather than 100. The correct answer is £27.40 not £2.74

9b. Various answers, for example: 30,600; 52,200; 41,400