

LO: To divide decimals by 10, 100 and 1000.

Beautiful Challenge

1. Copy out and complete the following:

$325 \div 10 = 32.5$

$550 \div 100 = 5.5$

$5400 \div 1000 = 5.4$

$3010 \div 100 = 30.1$

$4505 \div 100 = 45.05$

$3205 \div 10 = 320.5$

2. This number has been divided by 100. What was the original number?

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7320

3. Copy and complete the following calculations:

$5100 \div \underline{1000} = 5.1$

$5132 \div \underline{100} = 51.32$

$513 \div \underline{100} = 5.13$

$134 \div \underline{100} = 1.34$

$1230 \div \underline{1000} = 1.23$

$1.2 \div \underline{10} = 0.12$

4. True or False? $5151 \div 100 = 515.1$ **False**

5. Use the digit cards to create answers to the calculations below. Which calculation cannot be answers? You can use the cards more than once.



A. $7,132 \div 10 =$

A = 713.2

B. $7,140 \div 100 =$

B = 71.4 (it cannot be made)

C. $721 \div 10 =$

C = 72.1

6. These children are dividing numbers. Who is correct? Give a reason for your answer.



I think that
 $7,452 \div 100 = 74.52$



I think that
 $2,750 \div 1,000 = 27.5$

I think that
 $7,452 \div 100 = 745.2$



I think that
 $2,750 \div 1,000 = 2.75$



Hafsa and Gabriel are correct. Sinead only divided by 10 and Isabel only divided by 100.

7. These children are thinking of numbers. Can you work out which number each person is thinking of?



When multiplied by
1,000, my number
becomes 6,520.



When multiplied by
10 the number
becomes 7.6.

Flo was thinking of 6.52

Lucy was thinking of 0.76

Marvellous Challenge

1. Copy out and complete the following:

$$1238 \div 1000 = 1.238$$

$$36277 \div 1000 = 36.277$$

$$1238 \div 10 = 123.8$$

$$13820 \div 100 = 138.20$$

$$37622 \div 100 = 376.22$$

$$362.7 \div 100 = 3.627$$

2. This number has been divided by 100. What is the original number? **702.1**

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3. Copy and complete the following calculations:

$$5443 \div \underline{100} = 54.43$$

$$12340 \div \underline{1000} = 12.34$$

$$\underline{5403.3} \div 100 = 54.033$$

$$\underline{1203.4} \div 100 = 12.034$$

$$54430 \div 1000 = \underline{54.43}$$

$$12304 \div 10 = \underline{1230.4}$$

4. Dividing by 1000 can also help to convert some measurements from one unit to another. Are the conversions below correct?

$$1670\text{g} = 16.7\text{ kg}$$

No it should be 1.67kg

$$5689\text{m} = 568.9\text{km}$$

No it should be 5.689km

5. Use the digit cards to create answers to the calculations below. Which calculation cannot be answers? You can use the cards more than once.

7 2 3 0 6 .

A. $7,023 \div 100 =$

A = 70.23

B. $623 \div 1,000 =$

B = 0.623

C. $30.8 \div 10 =$

C = 3.08 (it cannot be made)

6. These children are converting units of measure. Who is correct? Give a reason for your answer.



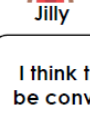
I think that 3,050m can be converted to 3.05km



I think that 5,690g can be converted to 5.609kg



I think that 3,050m can be converted to 30.5km



I think that 5,690g can be converted to 5.69kg

Alice and Chuan are correct. Cian only divided by 100. Jilly is incorrect as she has swapped the order of digits.

7. These children are thinking of numbers. Can you work out which number each person is thinking of?



My number is between 10 and 30. When multiplied by 100 the number becomes 2,155.



My number is between 5 and 10. When multiplied by 1,000 the number becomes 7,185.

Josh is thinking of 21.55

Maisie is thinking of 7.185

Splendid Challenge

1. Copy out and complete the following:

$699 \div 300 = 2.33$

$46.6 \div 20 = 2.33$

$6400.6 \div 200 = 32.003$

$2303 \div 100 = 23.03$

$3203 \div 100 = 32.03$

$96009 \div 3000 = 32.003$

2. Rosie has made 4509ml of squash. She drinks 1312ml. How many litres of squash is left? **3.197 litres**
3. Jack needs to cycle 52.459m for charity. He rests after 24.362m. How many kilometres has Jack got left to cycle? **28.097km**

4. Copy and complete the following calculations:

$42.304 \times \underline{2000} = 84608$

$69909 \div \underline{3000} = 23.303$

$48602 \div 200 = \underline{243.01}$

$64090 \div 1000 = \underline{64.09}$

$4109 \div \underline{100} = 41.09$

$\underline{\hspace{2cm}} \times 200 = \underline{\hspace{2cm}}$ (check your answers on a calculator!)

5. True or False? $8202 \div 2000 = 41.01$ **False it should be 4.101**

6. Complete the digit cards to create answers to two of the calculations below. Which calculation cannot be answers using your digit cards?



A. $423.1 \div 10 =$

A = 42.31

B. $4,826 \div 200 =$

B = 24.13

C. $4,512 \div 100 =$

C = 45.12 (this one cannot be made)

7. These children are dividing numbers. Who is correct? Give a reason for your answer.

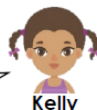


When I calculate $2,802 \div 200$, I will divide by 100 and double the answer to get 56.04.



When I calculate $4,608 \div 2,000$, I will divide by 1,000 and halve the answer to get 2.304.

When I calculate $2,802 \div 200$, I will divide by 100 and halve the answer to get 14.01.



When I calculate $4,608 \div 2,000$, I will divide by 1,000 and double the answer to get 9.216.



Kelly and Sean are correct. They need to be divided by 100 or 1000 and then halved not doubled.

8. These children are thinking of numbers. Can you work out which number each person is thinking of? Give three possible answers and use the units they have used.



My number has 3 decimal places and is between 7kg and 8kg. When converted to grams, the hundreds digit is 6 and the tens digit is 9.



My number has 3 decimal places and is between 4L and 5L. When converted to millilitres, the tens digit is 2 and the ones digit is 8.

There are various answers for both. For example Ian could have been thinking of 7.690kg, 7.691kg or 7.692kg. and Dylan could have been thinking of 4.728L, 4.828L or 4.928L.