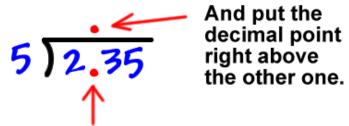# L.O. To divide decimal numbers.

Dividing with decimals works exactly like regular long division... with just one difference.

Let's divide 2.35 by 5:

$$2.35 \div 5$$

Set it up the usual way...

$$5 \overline{)2.35}$$

And put the decimal point right above the other one.

Now, just go on as usual and work around the decimal points. Just pretend they aren't even there!

$$
\begin{array}{r}
0.47 \\
5 \overline{)2.^2 3^3 5}
\end{array}
$$

Try to do the same as the column methods for addition, subtraction and multiplication - look after your pet decimal point – always place the decimal point first, then calculate the answer around it. (Otherwise your poor decimal point may be forgotten about it and it won't appear in your answer!)

Question 1:

a. £1.20 ÷ 6 =

b. £3.50 ÷ 5 =

c. £4.40 ÷ 11 =

d. £5.60 ÷ 7 =

e. £9.60 ÷ 8 =

Ext: Convert your decimal answer into money.

Question 2:

a. 19.2 cm ÷ 3 =

b. 33.2 cm ÷ 4 =

c. 27.6 cm ÷ 6 =

d. 42.4 cm ÷ 8 =

e. 27.9 cm ÷ 9 =

Ext: Convert your decimal answer into millimetres.

Question 3:

a. 3.96 m ÷ 3 =

b. 0.75 m ÷ 5 =

c. 8.56 m ÷ 4 =

d. 5.81 m ÷ 7 =

e. 0.54 m ÷ 6 =

Ext: Convert your decimal answer into centimetres.

4. Solve these word problems and show your method.

a). Four friends share £6.52 equally. How much do they each receive?

b) The cost of a stone border around a square patio is £22.40.
Work out the cost of one of the equal sides.

c) Michelle is organising a trip to a museum. The total price of the trip is £170.10 If nine people are going on the trip, how much should they pay each?

Answers:

Question 1:

Decimal → Money

a. £1.20 ÷ 6 = 0.20 = 20p

b. £3.50 ÷ 5 = 0.70 = 70p

c. £4.40 ÷ 11 = 0.40 = 40p

d. £5.60 ÷ 7 = 0.80 = 80p

e. £9.60 ÷ 8 = 1.20 = £1.20

Question 2:

cm → mm

a. 19.2 cm ÷ 3 = 6.4 cm = 64 mm

b. 33.2 cm ÷ 4 = 8.3 cm = 83 mm

c. 27.6 cm ÷ 6 = 4.6 cm = 46 mm

d. 42.4 cm ÷ 8 = 5.3 cm = 53 mm

e. 27.9 cm ÷ 9 = 3.1 cm = 31 mm

Question 3:

m → cm

a. 3.96 m ÷ 3 = 1.32m = 132 cm

b. 0.75 m ÷ 5 = 0.15m = 15 cm

c. 8.56 m ÷ 4 = 2.14 m = 214 cm

d. 5.81 m ÷ 7 = 0.83 m = 83 cm

e. 0.54 m ÷ 6 = 0.09 m = 9 cm

Question 4:

a. £1.63
b. £5.60
c. £18.90