Numeracy Skills 1 – Dividing by 10,100,100

<u>1.Multiplying a whole number by 10</u>

If we have whole number to multiply by 10 we simply add a zero.

7 x 10 = 70

23 x 10 = 230

<u>2.Multiplying a whole number by 100</u>

If we have whole number to multiply by 100 we simply add two zeros.

3 x 100 = 300

43 x 100 = 4300

 To multiply by 1000 add 3 zeros …

<u>3. To multiply a decimal by 10</u>

We move all the digits one place to the left or if you find it easier move the decimal point one place to the right making a larger number.

2.3 x 10 = 23

2.34 x 10 = 23.4

0.0034 x 10 = 0.034

123.567 x 10 = 1234.67

<u>4. To multiply a decimal by 100</u>

We move all the digits two places to the left or if you find it easier move the decimal point two places to the right making a larger number.

2.3 x 100 = 230

2.34 x 100 = 234

0.0034 x 100 = 0.34

123.567 x 100 = 12356.7

12.5 x 100, you will have to put in a zero to give you enough places to move the decimal point

12.50 x 100 = 1250

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5.To multiply a decimal by 1000

We move all the digits three places to the left or if you find it easier move the decimal point three places to the right making a larger number.

You may need to add some zeros in to allow you to move the decimal point

2.3 x 1000 = 2.300 x 1000 = 2300

 estimate 2x1000 = 2000 so 2.3 x 1000 is a bit more, the 3 is stuck to the 2

 so 2.3 x 1000 = 2300

2.34 x 1000 = 2340   estimate 2 x 1000 = 2000 answer is a bit more!

0.0034 x 1000 = 3.4 move the decimal point 3 places

123.567 x 1000 = 123567 move the decimal point 3 places

6.Dividing by 10

If we have a number which ends in a zero then we cross off a zero to divide by 10

30 ÷ 10 = 3

630 ÷ 10 = 63

820 ÷ 10 = 82

However if there is not a zero nor a decimal point ,we put the point in at the end.(That is where it is hiding!) we then move the decimal point one place to make the number smaller.

34 ÷ 10 = 3.4 we put the decimal point in 34.0 now move the point one place to the right to make the number smaller so we get 3.4.

7.Dividing by 100

If we have a number which ends in two zeros then we cross off two zeros to divide by 100

300 ÷ 100 = 3

6300 ÷ 100 = 63

8200 ÷ 100 = 82

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However if there is not a zero , only 1 zero or we have a decimal point ,we put the point in at the end.(That is where it is hiding!) we then move the decimal point two places to make the number smaller.

34 ÷ 100 = 0.34 we put the decimal point in 34.0 now move the point two places to the right to make the number smaller so we get 0.34

620 ÷ 100 = 6.20 we put the decimal point in 620.0 now move the point two places to the right to make the number smaller so we get 6.20 , we do not need the zero in the hundredth column so the answer is 6.2.

You can check if the answer is sensible, how many full hundreds in 620 , the answer is 6 and a bit! So 6.2 is sensible.