Identify the odd one out. Justify your answer:

 474.16 x 2 =

237.08 x 4 =

173.98 x 6 =

118.54 x 8 =



Lucy says, “I know that if I take out the decimal point and multiply the numbers, I can put the point back in two numbers from the end and the answer will always be the same as when I multiply with the decimal still in the number.”

Is Lucy correct? Prove it to me.

Steven says, “I know if I multiply a number with tenths and hundredths by 2, the answer will only have tenths.”

Is Steven correct? Explain how you know.

Challenge:

Using what you know about multiplying decimal numbers by a 1 digit number and long multiplication, create a help sheet to support people in multiplying decimal numbers by 2/3/4 digit numbers.

Answers:

173.98 x 6 is the odd one out because all the others total 948.32.

Lucy is incorrect because removing the decimal point changes the value of the number. Also, if you just stick one in two numbers from the end you don’t know it’s correct because the answer may only have tenths not tenths and hundredths.

Steven is incorrect because this is not always the case but it does sometimes work. For example 1.11 x 2 = 1.22 so this number has both tenths and hundredths. But 1.25 x 2 = 2.5 so sometimes Steven is correct.

(Accept other correct calculations to prove their answer).