Multiplication of Decimal Fractions

Use the whole number multiplication fact given to work out the answer to the decimal problem, then explain how you got the answer.
34 x 238 = 8092 so 0.34 x 23.8 =

Explanation

Gerry tries to work out 23.481 x 98.670945 by putting 23481 x 98 670 945 into a calculator. It shows an error message and 23168.924 in the display. Gerry knows the digits are correct, although the last ones are missing from the dislay. Explain why Gerry correctly claims 23.481 x 98.670945 = 2316.8924 from this display.

Explanation

Sandra has learnt a rule when multiplying decimals that she should add the decimal places. So to find 3.4 x 2.03 she works out 34 x 203 = 6902, then adds 1 and 2 = 3, then says the answer has 3 dps. So 3.4 x 2.03 = 6.902. But Jenny says this is unreliable. Jenny tells Sandra that 23.47105 x 678.43501 = 1592358204 except the decimal point is left out. Why does Sandra's method fail to locate the decimal point? By estimation locate where the point goes.

Explanation

Estimate these answers without using a calculator.

Problem	Estimate (Calculation)	Estimate (Answer)
467.78 x 0.48234	470 x 0.5	235
0.052 x 5890		
0.0234 x 0.789		
0.475 ÷ 99.08912	400 ÷ 0.1	4000
56.08 ÷ 0.7912		
0.0109 ÷ 0.009456		
0.98 ÷ 96.6 x 0.86		
109.9 ÷ 1025.6 x 94.82		
67 ÷ 0.691 ÷ 101.878		
100.98 x 0.444 ÷ 15.878		
0.98 x 0.44 x 105 x 10.08		