

Here is Gemma and Flo's work:

$$\begin{aligned}47 \div 20 &= 2.35 \\47 \div 15 &= 3.1333333 \\47 \div 17 &= 2.70588235 \\46 \div 17 &= 2.7058823 \\45 \div 17 &= 2.6470588 \\42 \div 17 &= 2.4705882 \\42 \div 15 &= 2.8 \\42 \div 16 &= 2.625 \\40 \div 16 &= 2.5 \\41 \div 16 &= 2.5625 \\47 \div 16 &= 2.9375 \\40 \div 14 &= 2.85714285 \\39 \div 12 &= 3.25 \\39 \div 13 &= 3 \\39 \div 11 &= 3.5454545 \\39 \div 15 &= 2.6 \\38 \div 12 &= 3.1666666 \\38 \div 13 &= 2.9230769 \\37 \div 11 &= 3.3636363 \\37 \div 12 &= 3.0833333 \\37 \div 10 &= 3.7 \\37 \div 11 &= 3.3636363 \\37 \div 10.5 &= 3.8947368 \\36 \div 12 &= 3.0 \\36.5 \div 10 &= 3.65 \\35.5 \div 10 &= 3.55 \\35 \div 4 &= 8.75\end{aligned}$$

Richard wrote the following:

3.125 x numbers 1 up

He explained:

“ I multiplied 3.125 by 1, then I tried multiplying 3.125 by 2, then I multiplied 3.125 by 3 ... “

Here is the start of Thomas' work:

“ I first looked at the number 0.125 and worked out what fraction of 1 it is. It turned out that it was an eighth.”

Can you take each of these starting ideas and develop it into a solution?