Divide Decimals by Integers

1. James is trying to solve a puzzle in an escape room.

He has found several keys with different division calculations on each one.

He says,

> **I have worked out that I will need a combination of 3 different keys. When the sum of all 3 calculations are added together, a number with 2 decimal places between 40 and 50 will allow me to escape.**

Key 1	Key 2	Key 3	Key 4	Key 5	Key 6	Key 7
						
56.6 ÷ 5	25.2 ÷ 4	84.63 ÷ 3	62.9 ÷ 5	45.32 ÷ 2	82.56 ÷ 8	46.2 ÷ 6

What could this number be? Investigate which combination of keys James could use in order to solve the puzzle. Explore different possible solutions.

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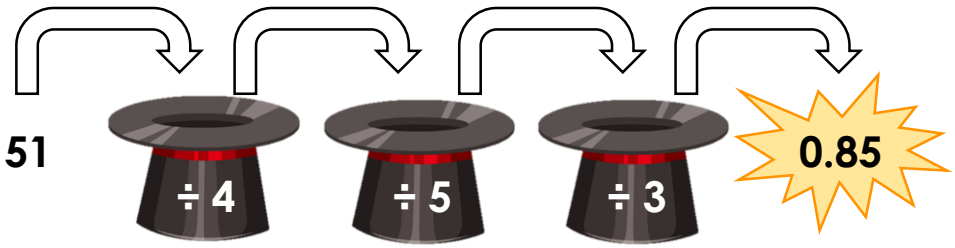
2. Marvin the Magician has 3 magical hats that divide anything placed in them by the 1-digit number shown on the front.

He wants to find 2-digit numbers that, when placed in his hats in succession, create a final number that is between 0 and 5 with 2 decimal places.

He has already found one 2-digit number that works:



Explore other possible numbers that Marvin could put in his hats.

Investigate the outcomes if Marvin changed the order of his hats.

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