

There are multiple correct answers to this week's challenge. The two best answers are $19/95=1/5$ and $26/65=2/5$. Another nice answer where the second fraction is not in lowest terms is $49/98=4/8$. Also acceptable are $11/11=1/1$, $22/22=2/2$, ... $99/99=9/9$. A more questionable solution is of the form $00/01=0/1$ because we normally suppress leading zeros. Notice that c cannot be zero because division by 0 is undefined.

Perhaps the nicest thing about the solutions is that they can be expanded to larger problems. For example:

$$1/4 = 16/64 = 166/664 = 1666/6664 = 16666/66664 = \dots$$

$$1/5 = 19/95 = 199/995 = 1999/9995 = 19999/99995 = \dots$$

$$2/5 = 26/65 = 266/665 = 2666/6665 = 26666/66665 = \dots$$