

MATHCOUNTS[®] Problem of the Week Archive

Happy Left Handers Day! – August 13, 2018

Problems & Solutions

International Left Handers Day is celebrated each year in August. If the ratio of the number of days of the month before International Left Handers Day to the number of days of the month after it is 2:3, on what date in August is this special day observed?

*Excluding International Left Handers Day, there are 30 days in the month of August. Based on the information provided, we conclude that $\frac{2}{5}$ of those days are before Left Handers Day and $\frac{3}{5}$ are after it. So, there are $\frac{2}{5} \times 30 = 12$ days before International Left Handers Day, which must be **August 13th**.*

Being a lefty hasn't always been as acceptable as it is these days. In fact, it is believed that prior to 1950, about 8 percent of people who identified themselves as right handed were actually natural left handers who were pressured into becoming right handers. Researchers reported that 2.5% of the U.S. population in 1900 claimed to be left handed, 97% claimed to be right handed and just 0.5% claimed to be ambidextrous. Given that the 1900 U.S. Census reported the U.S. population to be 76,212,168 people, how many natural left handers are estimated to have identified themselves as right handers?

*Of the 76,212,168 people in the U.S. in 1900, the number who claimed to be right handed was $(0.97)(76,212,168) \approx 73,925,803$ people. It is estimated that $(0.08)(73,925,803) \approx$ **5,914,064** of them were natural left handers.*

Lucy typed a list of all the words she could type using only her left hand, while Ricky typed a list of all the words he could type using only his right hand. Their lists had a combined total of 1632 words, but Lucy's list contained four times as many words as Ricky's list contained. How many more words did Lucy type than Ricky?

*If Lucy typed x words and Ricky typed y words, then $x + y = 1632$ and $x = 4y$. Substituting $4y$ for x in the first equation yields $4y + y = 1632 \rightarrow 5y = 1632 \rightarrow y = 326.4$. If Ricky typed 326 words, then Lucy typed $1632 - 326 = 1306$ words. Thus, Lucy typed $1306 - 326 =$ **980** more words.*

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