

MATH CHALLENGE

of the ECU Math Club

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MC11

Peggy's calculator has been malfunctioning. The screen does not display the numbers that she enters, only the results from the calculation. Further, the calculator has a random error that changes a 7 to an 8 with probability $1/6$ and changes an 8 to a 7 with probability $1/4$. Peggy is going to enter

$$878 - 878$$

in this calculator. If all other keys are functioning correctly, what is the probability that she finds a nonzero answer?

Submissions due: 12:00pm, March 23, 2020

Submit solutions to Wallace 410 or to Atilla.Sit@eku.edu (PDF only).

Solutions must include all supporting work.

Top solvers will be recognized.

