



This brainteaser was written by Derrick Niederman.

For one of the two actress names below, it is possible to replace each letter with a unique digit 0–9 to produce a valid addition statement. Can you determine which name works and which one doesn't?

$$\begin{array}{r}
 \text{SUSAN} \\
 + \text{SAINT} \\
 \hline
 \text{JAMES}
 \end{array}$$

$$\begin{array}{r}
 \text{MARY} \\
 + \text{BETH} \\
 \hline
 \text{HURT}
 \end{array}$$





Solution: Susan Saint James works, Mary Beth Hurt does not.

To see why Mary Beth Hurt's name does not work, give the puzzle another look.

In the tens column, there is an R in the first addend, and there is an R in the sum. For that to work, T must be either 0 or 9, depending on whether there was any carrying from the ones column. But in the ones column, notice that there is a T in the sum. This leads to a problem.

If $T = 0$, there will be carrying from the ones column, and if $T = 9$, there will be no carrying — exactly opposite of what is needed! Hence, no solution is possible.

$$\begin{array}{r} \text{MARY} \\ + \text{BETH} \\ \hline \text{HURT} \end{array}$$

Susan Saint James's name works out a whole lot better. Below is one of several possible solutions:

$$\begin{array}{r} 40461 \\ + 46513 \\ \hline 86974 \end{array}$$