

THE WIZARD'S EQUATION

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The three treasure answers in alphabetical order are:

AQUAMARINECOOTIESTHRONE

This gives the equation

AQUAMA + INE = OOTIE * TH + ONE

Step 1: Figure out that the flavor text is telling you $T=7$, $I=2$, $Q=9$.

Step 2: In order to make right-side product small enough to match the 6-digit number on the left side, O must be 0 or 1. But it can't be 0 because it's the first digit of a multi-digit number, so $O=1$.

Step 3: The size of the right-side product is now constrained enough (1172? times 7?) such that we know A must be 8 or 9. But $Q=9$ is already used, so we know $A=8$.

Step 4: Just divide 89???? into 1172? to find that most likely $H=6$. This will soon be confirmed.

Step 5: Equating the last digit on both sides (note that the E 's cancel out from INE and ONE), we get $A = \text{last digit of } E \text{ times } H$. With $A=8$ and $H=6$, the only possible way is $E=3$.

Step 6: Finish up by computing the product 11723 times 76 to get 890948. It's easy to figure out $U=0$, $M=4$, $N=5$.

Partial answers: $U=0$, $O=1$, $I=2$, $E=3$, $M=4$, $N=5$, $H=6$, $T=7$, $A=8$, $Q=9$