Chapel Hill Math Circle

Beginners' Group

Cryptarithms[1]

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Each statement below is called a cryptarithm. Every different letter represents a unique number from 0 to 9. As usual, natural numbers are not written with a leading zero. For instance, the number twenty-seven will be written 27, and not 027. Solve each of the puzzles below and have some fun!

1. W + O = OF

2. P + P + P = I = G + G

3. BA = A x A x A

4. C + CA = ATT

5.
$$\begin{array}{r} \text{ME} \\ +\text{ME} \\ \hline \text{BEE} \end{array}$$

[1] Based on Camp Logic, by Mark Saul and Sian Zelbo.

6. HH + HH = OOT

7.
$$\begin{array}{r} GO \\ +\ ON \\ \hline ONO \end{array}$$

8. A + A + A + A + A + A + A + A + A + P = E

9.
$$\begin{array}{r} AA \\ +\ A \\ \hline ELK \end{array}$$

10.
$$\begin{array}{r} UKK \\ KK \\ +\ K \\ \hline AUK \end{array}$$