

# Student Worksheet for Ep. 22: Cryptarithms

$$\begin{array}{r}
 \text{S E N D} \\
 + \text{M O R E} \\
 \hline
 \text{M O N E Y}
 \end{array}$$

$$\begin{array}{r}
 9 5 6 7 \\
 + 1 0 8 5 \\
 \hline
 1 0 6 5 2
 \end{array}$$

**Overview:** *Cryptarithms* are my absolute favorite type of brain workout. As a kid, you'd find me up a tree with a book of these and a pencil behind my ear as I wrestled with the latest puzzle. The basic idea is that the letters of a word really represent numbers, and you can figure out which letter equals which number by pure logic and a little guesswork.

Cryptarithms are a puzzle where the digits are replaced by letters or symbols. When the numbers are replaced by letters of the alphabet and it spells something readable, it's called *Alphametics*.

Rules: Each letter represents a unique digit, numbers may not start with zero, and the solution is unique. A few weird things to remember are: stars substitute for any digit, and are not related to each other, dots stand for a decimal point, and lower case 'x' means multiplication.

## Exercises:

DAD	THIS	OLD
HAD	<u>+SIZE</u>	OLD
A	SHORT	<u>+OLD</u>
<u>+BAD</u>		GOOD
HEAD	SPOT	
	A	NINA
OOOH	<u>+ TOP</u>	<u>+SING</u>
<u>+FOOD</u>	GHOST	AGAIN
FIGHT		
	MEMO	THY
PEAR	<u>+FROM</u>	<u>+HAY</u>
<u>+APPLE</u>	HOMER	MYTH
GRAPE		
	HERE	STARS
NO	<u>+ SHE</u>	<u>+RATE</u>
GUN	COMES	TREAT
<u>+NO</u>		
HUNT		