



CRYPT ARITHMETIC REFERENCE

A cryptarithm is a mathematical puzzle in which the digits have been replaced by letters. In these puzzles; each letter stands for a different digit. 0 is never the first digit of any number. These puzzles may have multiple answers.

$$A+A+A = BA$$

Step 1: Look at the letters carefully, "A" can not be 1,2,3. Consider why?

Step 2: Because three times the sum of the digit is a single-digit number but answer is two-digit number "BA".

$1+1+1=3$; $2+2+2=6$; $3+3+3=9$.

Step 3: So "A" should be one of these digits 4,5,6,7,8, or 9. Consider why?

Step 4: $4+4+4=12$; $5+5+5=15$; $6+6+6=18$; $7+7+7=21$; $8+8+8=24$; $9+9+9=27$.

Step 5: Do you know the solution now?

Step 6: The solution is - $A=5$ & $B=1$.

$$SUN + FUN = SWIM$$

Step 1: Look at the letters carefully & "U" can not be 0. Consider why?

Step 2: Because the sum of $N+N$ & $U+U$ is a different digit.

Step 3: "N" & "U" can be any digit between 1 to 9.

Step 4: Check why this is not possible $N=1$ and $U=6$ then $1+1=2$ and $6+6=12$? Think why?

Step 5: So make combinations with "N" & "U"; assume $N=2$ and $U=3$

Step 6: Check "S" & "F" - the sum of single digits makes two digit number.

Step 7: Assume $S=1$ & $F=9$.

Step 8: Can you find the solution now? There can be more than one solution also. $S=1$; $F=9$; $U=3$; $N=2$; $W=0$; $I=6$ & $M=4$.

$$SUN + FUN = SWIM \quad \underline{\hspace{2cm}} \quad 132+932= 1064$$



CRYPT ARITHMETIC

Directions:

1. Each letter represents a different single digit. Zero is never the first digit of any number.
2. If a letter is used more than once, it represents the same digit. The problems below can have more than one solution.
3. One has been completed for you.
4. Refer to the reference sheet to know more about Crypt Arithmetic.

$AB + CB$
Solution : $A = 2 ; B = 6 ; C=3$
26+36

BA
62

$AB+AB+AB+AB$
Solution : $A = _ ; B = _ ; C=_$

CA

$AB+BC$
Solution : $A = _ ; B = _ ; C=_$

BCB

$AA+BB$
Solution : $A = _ ; B = _ ; C=_$

CBC

$ABC+ACB$
Solution : $A = _ ; B = _ ; C=_$

CBA



CRYPT ARITHMETIC

Directions:

1. Each letter represents a different single digit. Zero is never the first digit of any number.
2. If a letter is used more than once, it represents the same digit. The problems below have unique solutions.
3. One has been completed for you.
4. Refer to the reference sheet to know more about Crypt Arithmetic.

RUN + RUN

Solution : R=8; U=7; N=6; J=1; M=5; P=2

$$876 + 876$$

JUMP

1752

SEND + MORE

Solution:

MONEY

PAN + SOFA + PAN

Solution :

HOUSE

FORTY + TEN + TEN

Solution :

SIXTY

CAT + BAT

Solution :

BOLD



CRYPT ARITHMETIC

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$AB \times 3$
Solution : A=2; B=4; C=7
24x3

CA
72

$ABC \times 6$
Solution:

BADC

$AB \times BA$
Solution :

ACA

$AA \times BB$
Solution :

CACD

$(AB+BC) \times CA$
Solution :

ACDE



CRYPT ARITHMETIC

Directions:

1. Make crypt arithmetic puzzles by yourself along with solutions in the below boxes. Ask your family members or friends to solve them. Follow the rules to make these puzzles.

Rule 1: Each letter represents a different single digit. Zero is never the first digit of any number.

Rule 2: If a letter is used more than once, it means the same digit. The problems below can have more than one solution.

2. Refer to the reference sheet to know more about Crypt Arithmetic.

Solution :

Solution :

Solution :

Solution :

Solution :
