Funny, isn't it?

Numbers Game

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*T*HE SCIENCE OF numbers, the foundation of all physical sciences is expressed in ten simple symbols, namely, 1-2-3-4-5-6-7-8-9 and 0. Through the mastery of numbers man has been able to achieve unbelievable technological advances.

Many of us though can still remember those grade-school days when we cursed the Hindus for having invented the Zero — a consistent hallmark of many a schoolboy's proficiency in arithmetic.

To cover up for such deficiency in arithmetic, we have come up with easy-to-follow tricks with unpredictable integers making us as precise as an IBM computer. These number tricks can be learned by an average third grader in ten minutes. Play them on unknowing parents. girl or boy friends, and anyone who can count. They

will swear that you have the making of another Einstein.

1. Examine the square of figures below.

$$\begin{array}{ccc} 4 & 3 & 8 \\ 9 & 5 & 1 \\ 2 & 7 & 6 \end{array}$$

Notice anything about it? If you're keen you'll easily discover that any three numbers in straight line, including the diagonals, add up to 15. Thus, 4 plus 3 plus 8 equals 15; 8 plus 1 plus 6 equals 15; and 2 plus 5 plus 8 equals 15.

2. Now, for another trick. Have your friend — without your seeing it — arrange any set of figures in the following manner:

$$\begin{array}{ccc} & 4 & \\ 5 & 3 & 6 \\ & 3 & \end{array}$$

By having him tell you only the sums of the "outer' 'numbers ,the horizontally-arranged numbers and vertically-arranged numbers

you will be able to "guess" just what digit you placed in the middle. (In our example —3). The trick works this way: By adding the outer numbers — 5 plus 4 plus 6 plus 3 (the circumference we call it) — we arrive at 18. Then total the vertical numbers — 4 plus 3 — is 10. While the sum of the horizontal numbers — 5 plus 3 plus 6 — comes up to 14. Add the horizontal and vertical totals and subtract it from the *circumference* total (whichever is bigger) and divide by 2. Thus, 10 plus 14 equals 24, and 24 minus 18 gives us 6. Six divided 2 equals — which is the middle number in our example. Simple as abc, isn't it?

3. *Nine* is an amazing number. With it and its multiples, i.e. numbers divisible by 9 like 18, 36, 81, countless numerical oddities can be drawn out. For instance, take any three digits (caution: the first digit must be bigger than the last). Subtract from it its inverted order, as the example below.

$$\begin{array}{r} 6\ \ 4\ \ 3 \\ -3\ \ 4\ \ 6 \\ \hline 2\ \ 9\ \ 7\ \ \textit{difference} \end{array}$$

By simply giving you 7 as your clue, you can instantly supply him the correct difference. This trick is guaranteed to leave them open-mounthed everytime. How it works: You will observe that in this trick the middle number is always 9. By know-

ing the last number, subtract it from 9, and the result will be the first number. Thus 9 minus 7 equals 2. Right off the butt, you come up with 297, the right answer in our example above. Caution: this applies only to three-digit minuends.

4. This is another one of those 9 tricks. Have your "victim" (always without your seeing it) draw up any series of numbers as many number as he desires. Next, have him add them all up, and from that same series, subtract its sum. Suppose he writes:

$$\begin{array}{r} 67336978 - 49 \\ -49 \\ \hline 67336929\ \ \textit{difference} \end{array}$$

Ask him to cancel any number ed he choses from the difference, and minus the cancelled number, to add them all up again as in the first procedure. Thus,

$$677334929 - 39$$

By telling you that the resulting sum is 39, you will be able to tell your astonished friend that the number he crossed out is *six* (as in our example).

The secret: What number will you add to 39 to bring it up to a number divisible by 9? Why, 6, of course, to make it 45!

So that if the resulting sum is 18, 9 is the crossed-out number that will make it a multiple of nine, meaning 27. (Caution: if the resulting sum is either 9

or 0, then the cancelled number is also either 9 or 0.)

5. For our last game, we come to a process in addition also involving the queer number 9. First write down any five digits. Second, draw four horizontal lines under it, and immediately under the last line write down the total which will be based on the first set of numbers. Have your friend fill in the first and third lines with any set of numbers he wishes. After he has done that, fill in the second and fourth lines with enough rapidity so that your "victim" will not think that you've had time to do some quick mental calculations. Then, have him sum up the entire thing, and to his continuing amazement he will arrive at the exact total you wrote down at the very start!

*H*ow IT WORKS: suppose you wrote down the first set of five numbers and the four lines immediately below it in our example below.

$$
\begin{array}{r}
63456 \\
88888 \\
\hline
11111
\end{array}
$$

$$
\begin{array}{r}
\hline
33333 \\
\hline
66666 \\
\hline
263454
\end{array}
$$

For our total, subtract 2 from the last digit in the topmost set of numbers and cast the subtracted 2 before the first digit, otherwise all numbers remain the same. Suppose further, that on the first line your friend jotted down 8-8-8-8-8, you'll know right away that the second line which you must fill should be 1-1-1-1-1 because it is the number you add to 8 to make it 9. The principle is the same for the next two lines. Thus, if he fills in the third line with 3-3-3-3-3, you fill in the last line with 6-6-6-6-6 because 6 plus 3 equals 9. Test the example yourself. Magical number, this number 9, itsn't it?

The beautiful thing about all these tricks is that you can not possibly be mistaken with your answers if you follow carefully the procedures laid down. Your "victim" might be in error but not you.

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A MAN NEEDS A WOMAN *to take care of him so that she can make him strong enough for her to lean on.*