## Word Games!

## 1) The Number Spelling Game

Pick a number and write it in English. Count the letters in the word. Next write that number word. Example:

14 fourteen

"fourteen" has eight letters so next we write

8 eight

"eight" has five letters, so we write:

5 five....

Try this with a few different starting numbers. Show your work neatly. What do you notice? Is there something that will always happen in this game? Explain.

Try this game in Spanish, or in another language that uses an alphabet. Do different things happen in different languages? Please put one neat example from a language other than English on an index card, so we can make a bulletin board of many languages!

2) A New Word Game?

Here's one I just made up, but maybe someone invented it before me! Start with a word, then take all or part of it and scramble the letters to make a new word. Then repeat. Note that once you take part of a word, you can't go back! Here are a few examples:

read	trouble	call	seat
dear	route	all	east
dare	tour	la	eats
are	our	a	eat
ear	or		ate
era	0		tea
a			at
			a

So in that last example I made 8 words starting with a 4-letter word. (I've also found a 5-letter word that yielded 14 different words!) See what you can discover!

## 3) Doublets!

Doublets is a very popular word game invented by Lewis Carroll. There's no scrambling in this game. You start with one word, and try to reach another word by changing one letter at a time. Each word along the way must be a real word you can find in the dictionary. Here are two examples. I'll change "sick" to "well" in 4 steps and "neat" to "mess" in 6 steps:

sick	neat
silk	nest
sill	pest
sell	post
well	most
	moss
	mess

Can you change "cat" to "dog"? Can you change "summer" to "winter"? I found a way to change "white" to "black" in 15 steps; can you do it in fewer steps? Can you change "silk" to "road"? Make up some challenges of your own!

## 4) Human versus Calculator!

Here's one for those of you who prefer some number work to word play. With a push of a few buttons, a calculator can tell me the square root of 50 is 7.071068. Of course that's not an exact answer; it's just correct to the nearest millionth. With paper and pencil, you can beat the calculator and get a more accurate answer (but not a faster one). Just estimate the square root of 50, divide by your estimate, then average your divisor and quotient. That's now a better estimate! Repeat using that estimate. I just did four long division problems and I now know eight correct decimal places—two more than the calculator. It didn't take all that long. Of course, on my last long division I was dividing by a 7-digit number, but it's easier than you think, and it's definitely fun! Try to find the square root of 50 using divide and average. Try to get eight decimal places. Check your answer with RAF. Then try a different square root.

Have fun!