

TO: ALL STUDENTS

MAY 10, 2001

HERE is a TECHNIQUE that I think will MAKE it easier TO DO "WORD COMBINATION" problems. Use CIRCLES, BOXES, & TRIANGLES.

FOR EXAMPLE: How MANY DIFFERENT WAYS CAN the letters be ARRANGED?

C i R C u L A R  
1 2 3 4 5 6 7 8

$$\therefore \frac{8!}{2!2!} = 10,080$$

use O's, □'s, & Δ's to easily COUNT "like" letters

\* "WRITE OUT" your COUNT OF THE total NUMBER OF letters

R E F L E C T I V E  
1 2 3 4 5 6 7 8 9 10

$$\therefore \frac{10!}{3!} = 604,800$$

IN THE RARE CASES WHEN YOU NEED TO GO beyond O's, □'s, AND Δ's you can put AN \* above the NEXT "like" letters, \*'s (STARS) OR WHATEVER. NOTE, I ALSO recommend "writing out" your counting of the letters AS I've SHOWN ABOVE - it's VERY HARD TO MAKE A MISTAKE if you do this; TAKES SURPRISINGLY little extra time.

END... M.C.