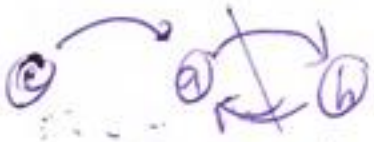
Anti-Symmetric ≠ non-symmetric

You cannot have both (x,y) and (y,x) ever



non sym

not anti-sym

here

(a,b)

(b,a)

anti-sym, $x < y$

anti-sym $x \leq y$

~~(a,b) and (b,a)~~

(anti-sym relat. on 3 items) $= 2 \times 2 \times 2 \times 3 \times 3 \times 3$

do same with a, and b, (1,1) (b,b) (a,a)

not (1,1) not (b,2) not (a,a)

(anti sym on n items)

$2^n \times 3^{C(n,2)}$

1,234,567,890 nuts?