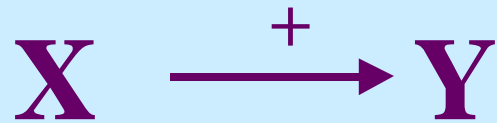
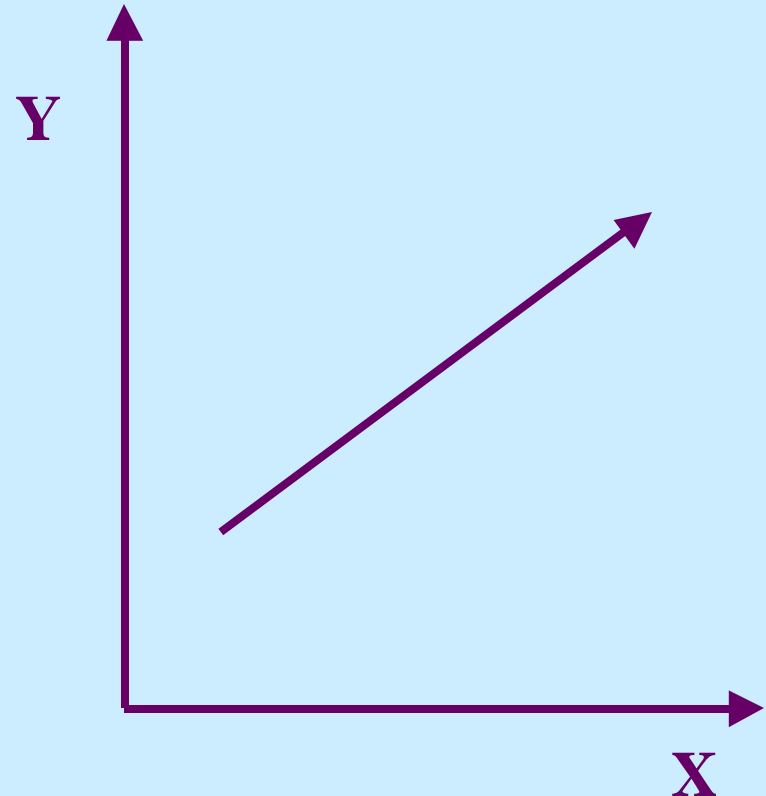


# Criteria for Causality

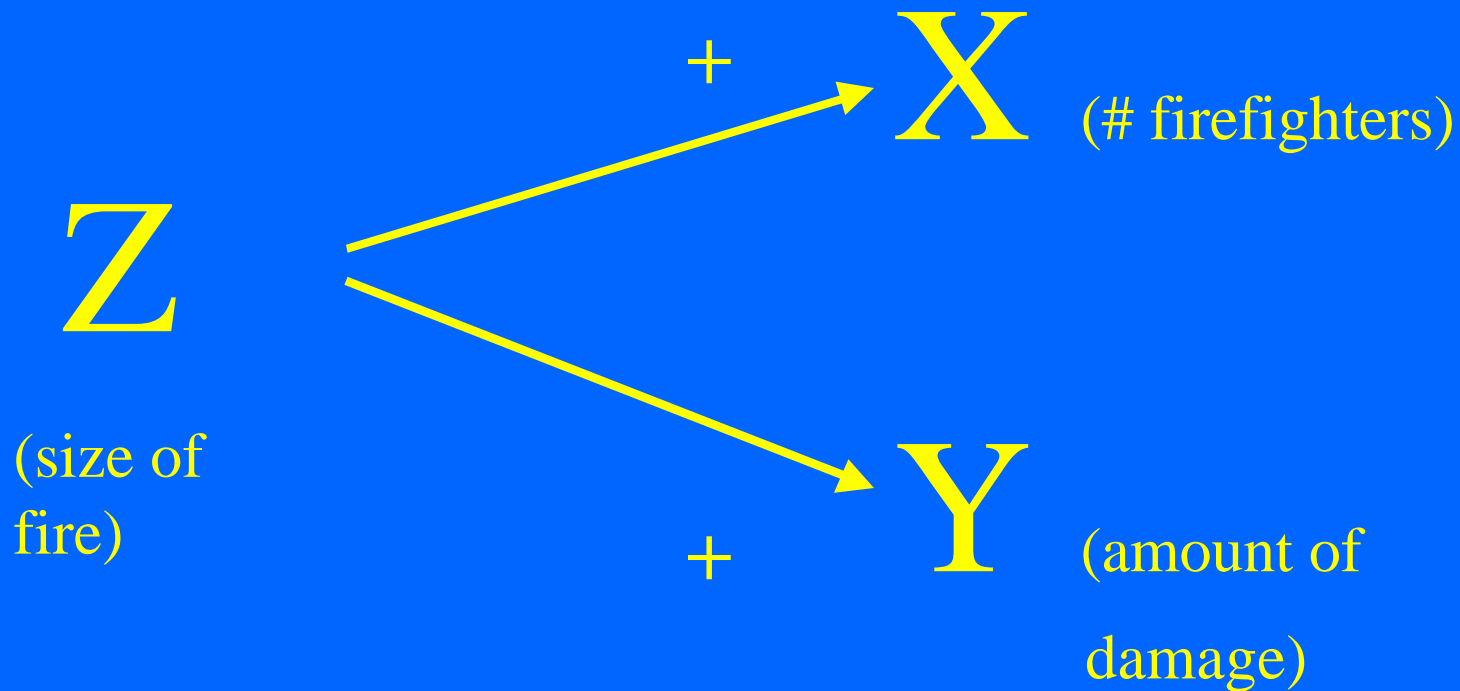


**X** = # firefighters

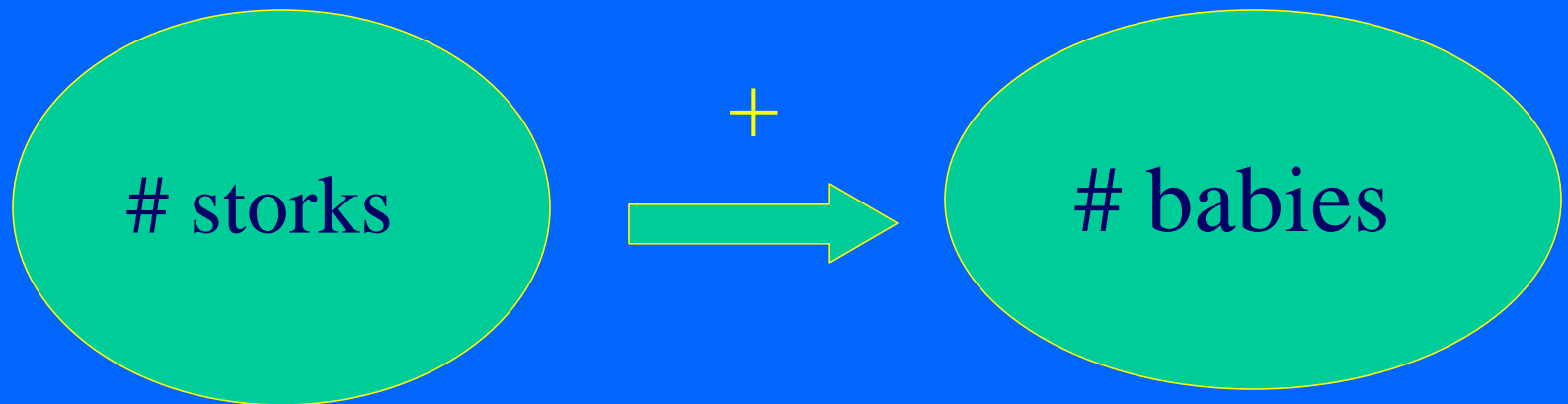
**Y** = amt. of damage



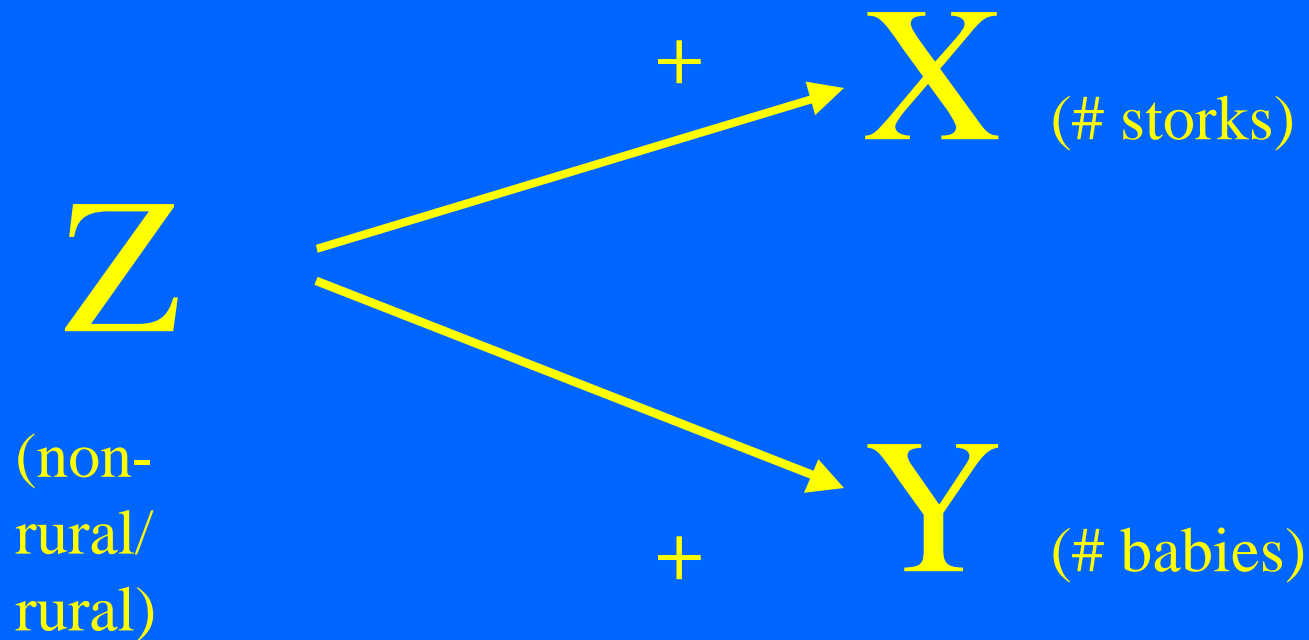
# Spurious relationship:



# Spurious relationship?



# Spurious relationship:



# Types of causes (n=2)

➤ Necessary cause: X must happen for Y to happen

“Need X to get Y”

➤ Sufficient cause: Y always happens when X happens

“Always get Y when you have X”