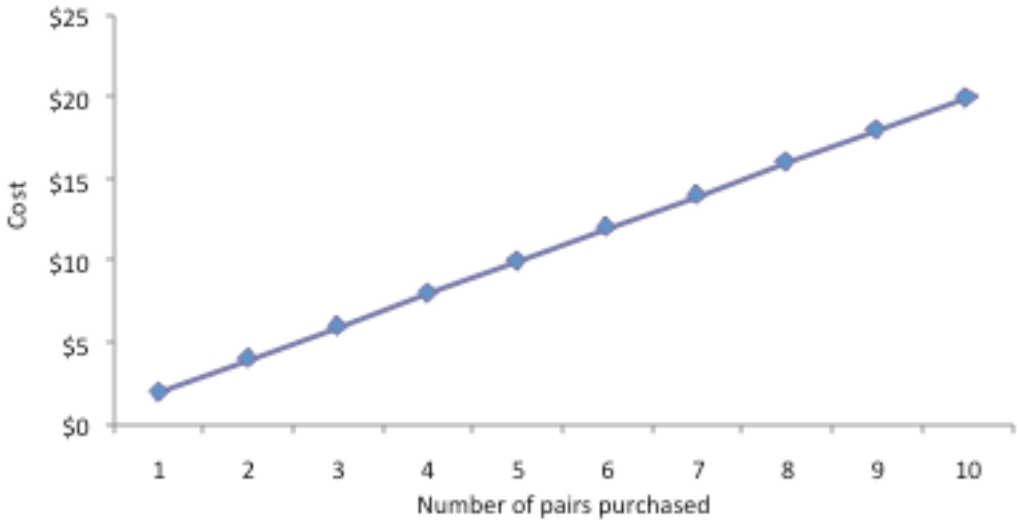
LINEARITY VS. NONLINEARITY EXERCISE

LINEARITY

Let's say that we are buying socks in a department store. If a pair of socks costs $2, and there are no discounts, then our total cost is directly proportional to the number of pairs we purchase, meaning that we pay $2 for a single pair, $4 for two pairs, $20 for ten pairs, etc. Here our total cost is linear with respect to the number of pairs we purchase and looks like this.



NONLINEARITY

On the other hand, if there was a 20 cents discount for the second pair, 40 cents discount for the third, etc., up to the fifth pair and 1 dolar afterwards, then our total cost would be nonlinear, and looks like this.