

2. Correct. The answer is true.

Homogeneity is a property that arises in more than one context in demand analysis and functions are often constrained to have this property when they are estimated using actual data. We can define homogeneity of any degree as follows. A function $y = f(X_1, X_2, \dots, X_n)$ is homogeneous of degree k , if and only if

$$\lambda^k y = f(\lambda X_1, \lambda X_2, \dots, \lambda X_n).$$

If k is equal to 0, then $\lambda^0 = 1$, and the function is called homogenous of degree 0 in the X_i . This the case four our budget constraint which can be seen as follows:

$$\lambda^0 Y = \lambda^0 P_F F + \lambda^0 P_E E + \lambda^0 P_S S = Y = P_F F + P_E E + P_S S$$

If k is equal to 1, the function is called linearly homogenous.