_____Name

Consider the market for scenic views. Furthermore, suppose you want to estimate the benefits of improving the (quality) "level" of a scenic view in an area. Suppose the price of a house is a function of two attributes and can be illustrated as follows:

$$P = F(view, bedrooms)$$

where *view* denotes the level of scenic view and *bedrooms* denotes the number of bedrooms. Assume the hedonic price function takes the following form:

$$P = F(view, bedrooms) = [view^2 + bedrooms^2]^{1/2}$$

Does the hedonic price function exhibit the property of diminishing marginal returns to scenic views? To answer this question you may either show this numerically or with calculus. Do you think this specific functional form is an accurate representation of the real world?

First derivative with respect to *view*,

$$\partial P/\partial view = (1/2)(2*view)[view^2 + bedrooms^2]^{-1/2} = view/[view^2 + bedrooms^2]^{1/2} > 0$$

Second derivative with respect to *view* via the quotient rule,

$$\partial^2 P/\partial view^2 = [(view^2 + bedrooms^2)^{1/2} - view^2(view^2 + bedrooms^2)^{-1/2}]/(view^2 + bedrooms^2)$$
$$= bedrooms^2/(view^2 + bedrooms^2)^{3/2} > 0$$

This function does not have diminishing marginal returns to capital. It has increasing marginal returns to capital.

We would probably expect the price function to exhibit diminishing marginal returns with respect to *view*. It is not likely this specific functional form is an accurate representation of the real world.