Calculus for Business: Applications

# Elasticity of Demand

If demand and price are related by , the elasticity of demand is given by

# Exponential Growth and Decay

If and then

# Gini Index

If is the equation of a Lorenz curve, then the

# Probability Density Function

is a probability density function if and only if

1. for all real x.

2.

3. If ,

# Continuous Income Stream

If is the rate of flow of a continuous income stream,

1. The total income from to () is given by

2. If the income stream is continuously invested at a rate r, compounded continuously, the future value of the income stream is given by

# Consumer’s & Producer’s Surplus

If price and demand are related by the equation and is a point on the price-demand curve, the consumer’s surplus is given by

If price and supply are related by the equation and is a point on the price-supply curve, the producer’s surplus is given by