## EX 023 <br> Utility Maximization with a Cobb-Douglas Utility Function

She has income of $\$ 1,000$. Goods( X )is $\$ 8$ and Goods $(\mathrm{Y})$ priced at $\$ 10$.
How many of each $\mathrm{X}, \mathrm{Y}$ should she purchase if her utility is characterized by the following function? [ X :Quantity of Goods(X ), Y: Quantity of Goods(Y) ]

$$
\mathrm{U}=\mathrm{X}^{0.8} \mathrm{Y}^{0.2}
$$

