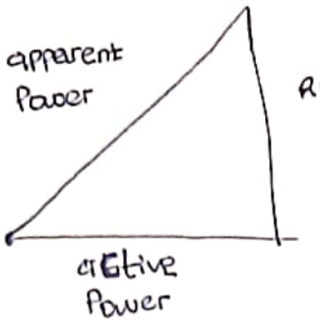

apparent Power $S = V \cdot A$

$= 400 \times 5$

$= 2000\ V \cdot A$

active Power $P = VI\cos\theta$

$= 2000 \cdot 0.8$

$= 1600$ watts

Reactive Power $Q = VI\sin\theta$

$= 2000 \cdot 0.6$

$= 1200$ watts

Power Factor P.F θ

$\cos\phi = 0.8$

$\phi = \cos^{-1} 0.8$

$= 0.643°$

Active current I_p

$$\frac{1600}{V\cdot\cos\theta} = I_p$$

$$I_p = \frac{1600}{400 \cdot 0.8} = 5 \text{ ampere}$$

reactive Current

$$I_q = \frac{Q}{V\sin\theta} = \frac{1200}{400 \cdot 0.599}$$

$= 5$ ampere