



Q1)

Find the phasors corresponding to the following signals:

Q2)

(a) $v(t) = 21 \cos(4t - 15^\circ) \text{ V}$

(b) $i(t) = -8 \sin(10t + 70^\circ) \text{ mA}$

(c) $v(t) = 120 \sin(10t - 50^\circ) \text{ V}$

(d) $i(t) = -60 \cos(30t + 10^\circ) \text{ mA}$

Let $X = 4 \angle 40^\circ$ and $Y = 20 \angle -30^\circ$. Evaluate the following quantities and express your results in polar form:

Q3)

(a) $(X + Y)X^*$

(b) $(X - Y)^*$

(c) $(X + Y)/X$

Q4)

End

Using phasors, find:

(a) $3 \cos(20t + 10^\circ) - 5 \cos(20t - 30^\circ)$

(b) $40 \sin 50t + 30 \cos(50t - 45^\circ)$

(c) $20 \sin 400t + 10 \cos(400t + 60^\circ)$
 $-5 \sin(400t - 20^\circ)$