1 Homework 22

2 Important Remarks

3 • Optional problems.

4 1. Problem 9.17

5 Answer:

6 (i) $P_{75} = 0.033mW$

7 (ii) $P_{150} = 0.067mW$

8 (iii) $P_{25} = 28.9mW$

9 (iv) $P_{1.5k} = 1.67W$

10 2. Problem 9.19 **modified as follows:**

11 Substitute "Given that the voltage across the resistor is 3 V rms"

12 with "Given that the voltage across the capacitor is 3 V rms".

13 Answer: $R = 1\Omega$, $C = \frac{1}{2}$ F.

14 3. Problem 9.22

15 4. Problem 9.24

16

17 Answer:

18 • $I = 7.52\angle-29.8^o$

19 • $\cos(298^o) = 0.87$

20 • lagging