

Electric Circuits

Answer Sheet – Homework Set 12

Questions beginning with ** do not have answers on this sheet.

NOTE! *It is possible your answers for current could have a different sign depending on how you draw or your label circuits where you have a choice.*

$10 \mu\text{F}$

$7 \text{ k}\Omega$

5 ms

$15(1-3t)e^{-3t} \text{ A}$

$8(1-e^{-t/4}) \text{ V}$

$-6e^{-t/4} \text{ A } 40e^{-50t} \text{ V}$

$6.7e^{-12.5t} \text{ V}$

5 mF

50Ω

0.25 s

1 F

$10 \mu\text{F}$

$4/3 \mu\text{F}$

5 ms

$8e^{-t/12} \text{ V}$

3 F

$$-\left(\frac{1}{5}\right)\cos(4t) + \frac{6}{5}$$

0.25 J

$0.8e^{-t/480} \text{ A}$

0.0866 s

$0.714 \mu\text{F}$

$4/3 \mu\text{F}$

70.7 W

$0.714 \mu\text{F}$

$30t(1-3t)e^{-6t} \text{ W}$

0.066 s

0.8 A

8 F

$7 \text{ k}\Omega$

12 s

3.46 ms

$9e^{-16.7t} \text{ V}$

13.6 V