#6, 7, 8, 12, 17, 20, 22,
28, 30, 31, 35

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EE110
Chapter 4 HW

#6 a) 1000W = 1kW
b) 3750W = 3.75 kW
c) 160W = 0.16 kW
d) 50 000 W = 50 kW

#7
a) 1,000,000W = 1MW
b) 3.6×10^6 W = 3.6MW
c) 15×10^7 W = 150 MW
d) 8,700 kW = 8.7MW

#8 a) 1W = 1000 mW
0.4W = 400mW
0.002W = 2mW
0.0125W = 12.5mW

#12 300W Bulb
30 DAYS
KWH = ?

$$300W \cdot \frac{1kW}{1000W} \cdot 30 \text{ DAYS} \cdot \frac{24hr}{1 \text{ DAY}} = \boxed{216 \text{ kWH}}$$

#17 $R = \frac{V}{I}$

$$\frac{75V}{2A} = \boxed{37.5\,\Omega}$$

#20

$I = 500\,mA = 0.5A$ $\quad P = I^2 R$

$R = 4.7\,k\Omega = 4700\,\Omega$

$$(.5)^2 \cdot 4700 = 1175\,W = \boxed{1.175\,kW}$$

#22

$V = 60V$

$R = 680\,\Omega$ $\quad P = \frac{V^2}{R}$

$$\frac{(60V)^2}{680\,\Omega} = \boxed{5.29\,W}$$

#28

$I = 10mA$
$R = 6.8k\Omega$
$P = ?$

$P = I^2R$

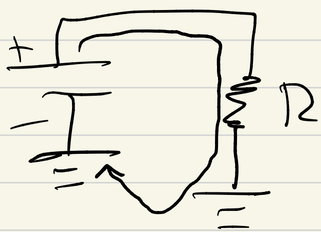
$(0.01A)^2 \cdot (6800\Omega) =$

$\boxed{.68W}$

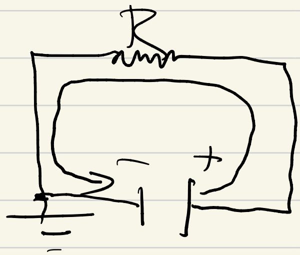
1W would be OK
2W would be ideal

#30

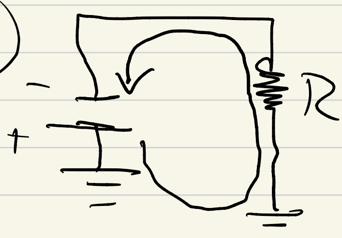
A)



C)



B)



#31

$R = 50\Omega$

$P = 1W$

$P = \frac{V^2}{R}$ $V^2 = PR$

$V = \sqrt{PR}$ $\sqrt{50 \cdot 1} = \sqrt{50} =$

$\boxed{7.07V}$

#35

$\frac{800Ah}{200h} = \boxed{4A}$