P #A(a)

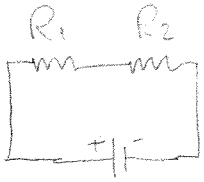
Ch 18 - Worksheet

(a) $V_{eq} = 18\ V$
$R_1 = 18\ \Omega$
$R_2 = 6\ \Omega$

For Series:

$R_{eq} = R_1 + R_2$
$= 18\ \Omega + 6\ \Omega$

$R_{eq} = 24\ \Omega$



Find current:

$V_{eq} = I_{eq} \cdot R_{eq}$
$(18\ V) = I_{eq} \cdot (24\ \Omega)$

$I_{eq} = I_1 = I_2 = .75\ A$

Find voltage drop:

$V_1 = I_1 \cdot R_1$
$= (.75\ A)(18\ \Omega)$

$V_1 = 13.5\ V$

$V_2 = I_2 \cdot R_2$
$= (.75A)(6\ \Omega)$

$V_2 = 4.5\ V$