

-KEY-

**Physics 11 Resistors Practice #2**

Name: \_\_\_\_\_

1. Calculate the equivalent resistance of the circuits drawn below.

a)

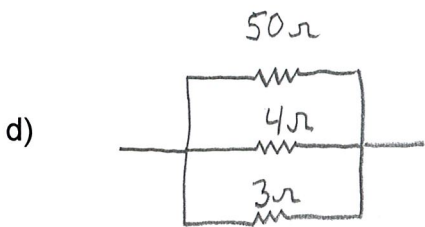
$\frac{1}{R_p} = \frac{1}{12} + \frac{1}{6} = .25$   
 $R_p = 4$   
 $R_{TOTAL} = 4 + 4 = 8$   
 $R_{TOTAL} = \underline{8 \Omega}$

b)

$R_{TOTAL} = \underline{11.64 \Omega}$   
 $\frac{1}{R_p} = \frac{1}{2} + \frac{1}{9} = 0.611$   
 $1.64 = R_p$

c)

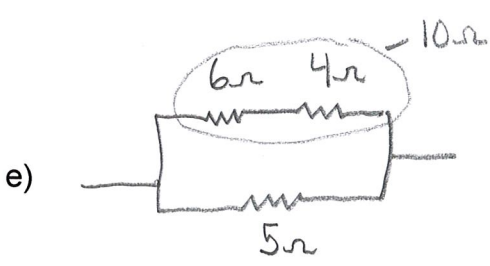
$\frac{1}{R_p} = \frac{1}{2} + \frac{1}{4} = 0.75$   
 $R_p = 1.33$   
 $\frac{1}{R_p} = \frac{1}{6} + \frac{1}{3} = 0.5$   
 $R_p = 2$   
 $R_{TOTAL} = \underline{3.33 \Omega}$



$$R_{TOTAL} = \underline{1.66 \Omega}$$

$$\frac{1}{R_p} = \frac{1}{50} + \frac{1}{4} + \frac{1}{3} = 0.60\bar{3}$$

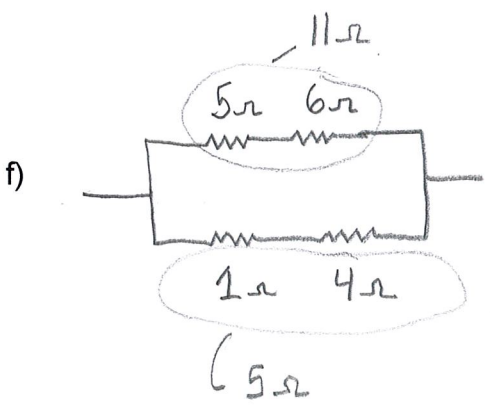
$$R_p = 1.66$$



$$R_{TOTAL} = \underline{3.3 \Omega}$$

$$\frac{1}{R_p} = \frac{1}{10} + \frac{1}{5} = 0.3$$

$$R_p = 3.\bar{3}$$



$$R_{TOTAL} = \underline{3.44 \Omega}$$

$$\frac{1}{R_p} = \frac{1}{11} + \frac{1}{5} = 0.2909$$

$$R_p = 3.44$$