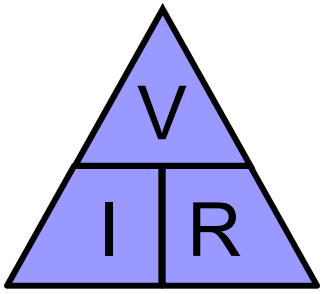
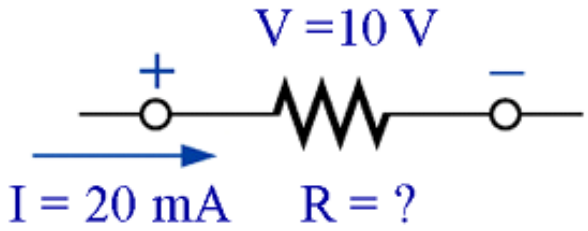
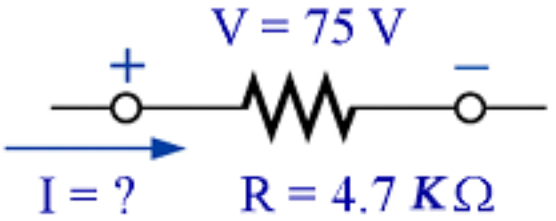
Breakout Exercise #1

For each of the Ohm's law problems shown, find the unknown.

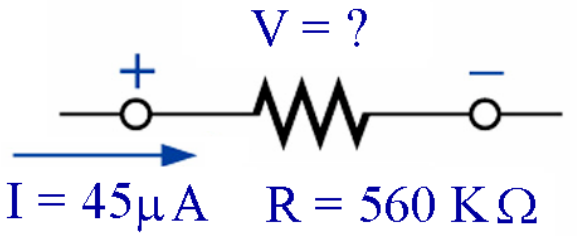




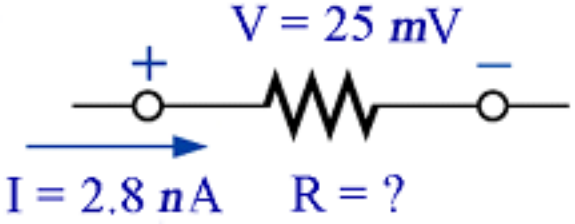
$$R = \frac{V}{I} = \frac{10\,V}{20\,mA} = 500\,\Omega$$



$$I = \frac{V}{R} = \frac{75\,V}{4.7K\Omega} = 15.96\,mA$$



$$V = 45\mu A \cdot 560K\Omega = 25.2V$$



$$R = \frac{V}{I} = \frac{25\,mV}{2.8\,nA} = 8.93\,M\Omega$$

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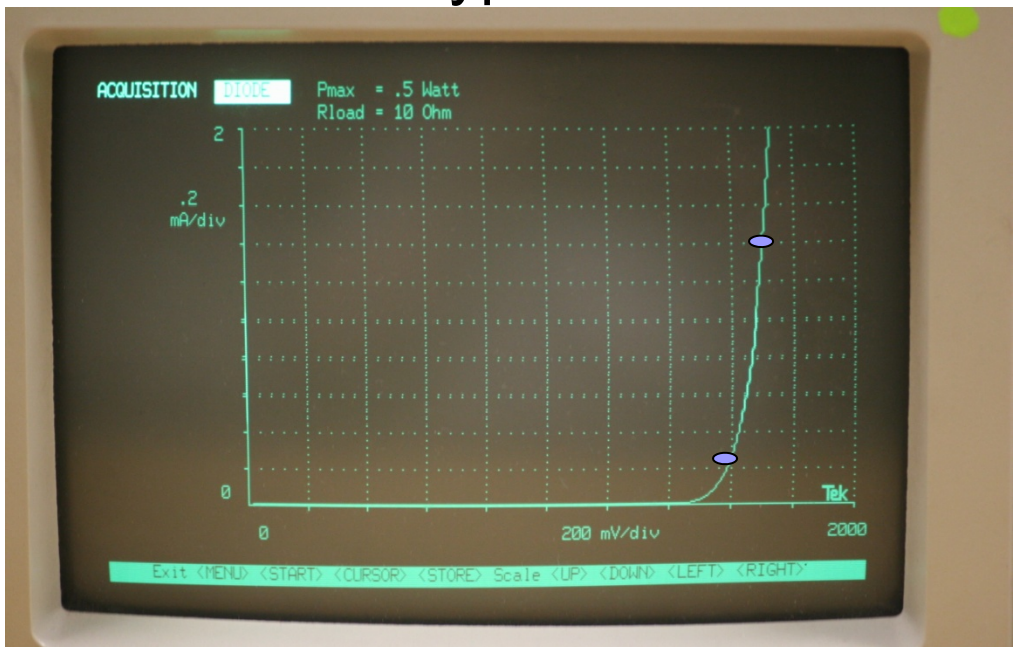
Breakout Exercise #2

- Estimate the resistance of the diode at V_D = 1.6V and V_D = 1.7V, using the I-V characteristics shown.
- Bonus: What type of diode is this?



V_D = 1.7V, ID ~ 1.4mA
R = 1.21 KΩ

V_D = 1.6V, ID ~ 250uA
R = 6.4 KΩ

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