## Distance and Midpoint Formulas

Distance, $d$, between two endpoints $\left(x_{1}, y_{1}\right)$ and $\left(x_{2}, y_{2}\right)$ is given by

$$
d=\sqrt{\left(x_{2}-x_{1}\right)^{2}+\left(y_{2}-y_{1}\right)^{2}}
$$

Midpoint of the line segment with Endpoints $\left(x_{1}, y_{1}\right)$ and $\left(x_{2}, y_{2}\right)$ is given by

$$
\left(\frac{x_{1}+x_{2}}{2}, \frac{y_{1}+y_{2}}{2}\right)
$$

