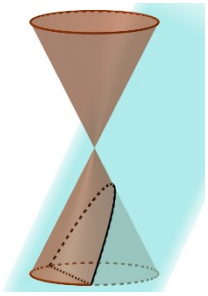
Precalculus

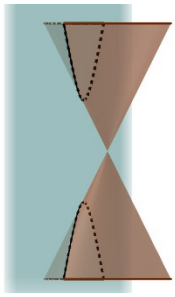
7-01 Lines

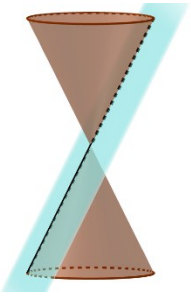
Conic sections

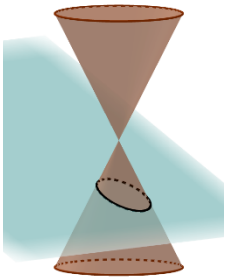
- Intersections of a _____with a _____
- _____
- _____
- _____

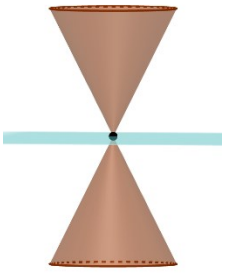


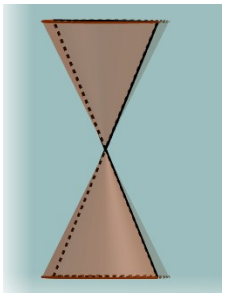
- _____
- _____
- _____





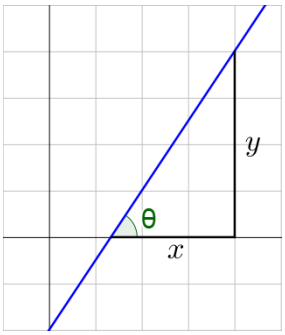






Lines

- $Ax + By + C = 0$ or $y = mx + b$



Inclination

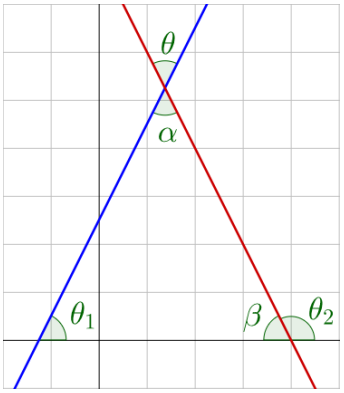
- Describes _____of line
- Angle it makes with _____

$$\tan\theta = m$$

- Where $0° < \theta < 180°$
  - If $\theta < 0$, add 180°

Find the inclination of $4x - 2y + 5 = 0$.

Angle between Two Lines



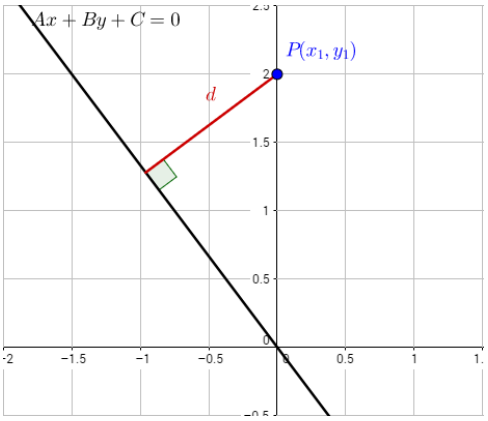
$$\theta = \theta_2 - \theta_1$$

$$\tan\theta = \left|\frac{m_2 - m_1}{1 + m_1 m_2}\right|$$

Where $0° < \theta < 90°$

Find the angle between $2x + y = 4$ and $x - y = 2$.

Distance from a Point to a Line



- Point $(x_1,\ y_1)$ and Line $Ax + By + C = 0$

$$d = \frac{|Ax_1 + By_1 + C|}{\sqrt{A^2 + B^2}}$$

Find the distance from $(0, 2)$ to $4x + 3y = 0$.