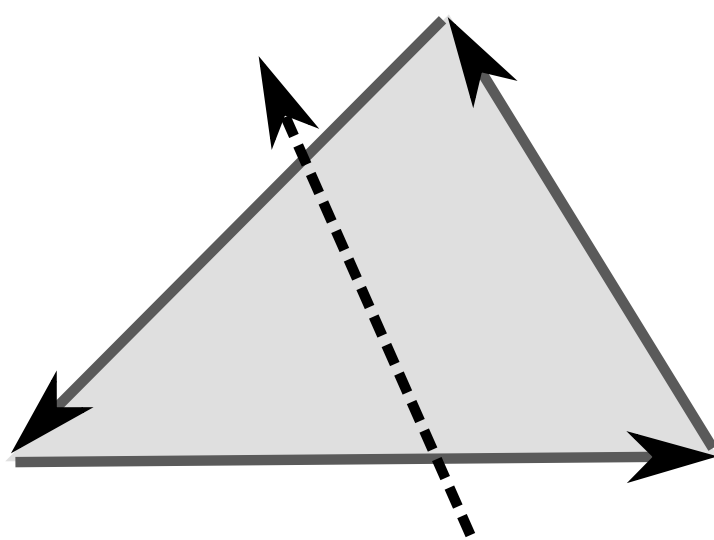
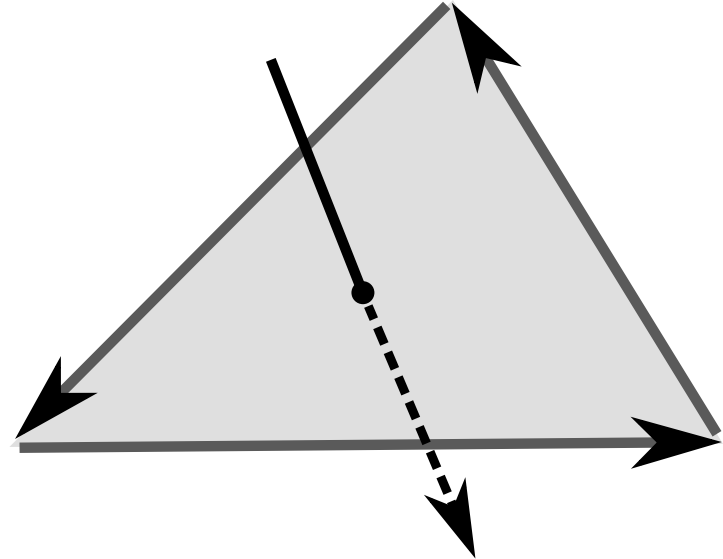


$$\pi_p \cdot \pi_i < 0 \quad \forall i$$



$$\pi_p \cdot \pi_i = 0 \quad \exists i$$

special case



$$\pi_p \cdot \pi_i > 0 \quad \forall i$$