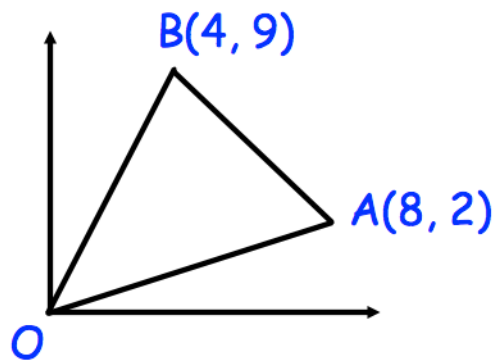


September 22nd

Find the area of triangle OAB.



$$OB = \sqrt{4^2 + 9^2} = \sqrt{97}$$

$$OA = \sqrt{2^2 + 8^2} = \sqrt{68}$$

$$\text{Angle } A\hat{O}B = B\hat{O}X - A\hat{O}X$$

$$= \tan^{-1} \frac{9}{4} - \tan^{-1} \frac{2}{8} \approx 52^\circ$$

$$\therefore \text{area} = \frac{1}{2} \sqrt{97} \sqrt{68} \sin 52^\circ$$

$$= \mathbf{32}$$