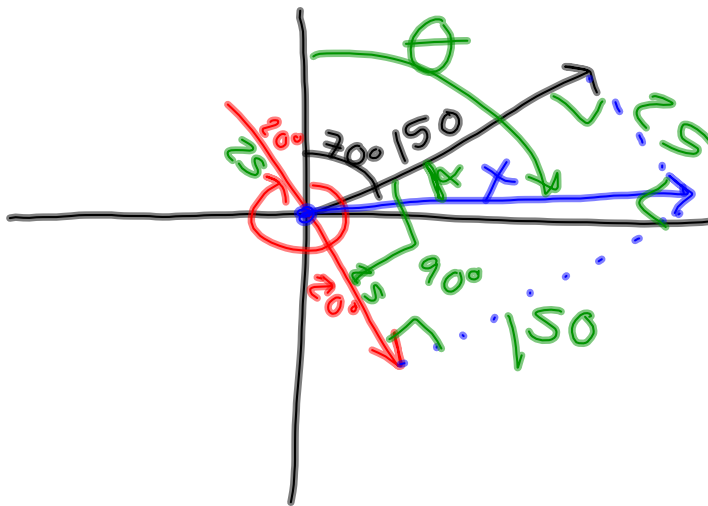


wind 25 km/h from 340°.

plane heading 70° 150 km/h

what is plane's actual heading?



$$X = \sqrt{150^2 + 25^2}$$

$$\alpha = \tan^{-1} \frac{25}{150}$$

$$\theta = 70^\circ + \alpha$$

Review Prob #3

$$v = r\omega$$

$$r = 9 \text{ in} ; \omega = \frac{7 \text{ rad}}{5} ; v = ? \text{ ft/min}$$

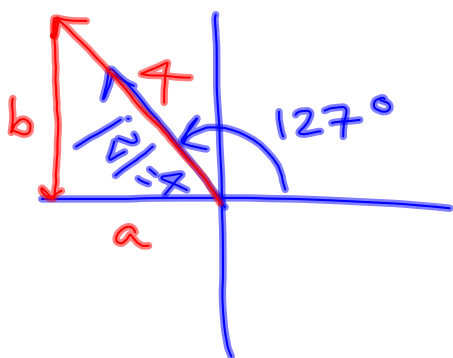
$$v = 9 \cancel{\text{ in}} \cdot \frac{7 \text{ rad}}{5} \cdot \frac{60 \cancel{\text{ s}}}{1 \text{ min}} \cdot \frac{1 \text{ ft}}{12 \cancel{\text{ in}}} = 9 \cdot 7 \cdot 5 \text{ ft/min}$$

$$r = \frac{v}{\omega} = \frac{1}{1}$$

$$= \frac{v}{1} \cdot \frac{1}{\omega} \dots$$

$$\overset{4}{35} \underset{9}{9} \boxed{315 \text{ ft/min}}$$

21.



$$\cos 127^\circ = \frac{a}{4} \quad a = 4 \cos 127^\circ \approx$$

$$\sin 127^\circ = \frac{b}{4} \quad b = 4 \sin 127^\circ \approx$$

$$\boxed{a\vec{i} + b\vec{j}}$$