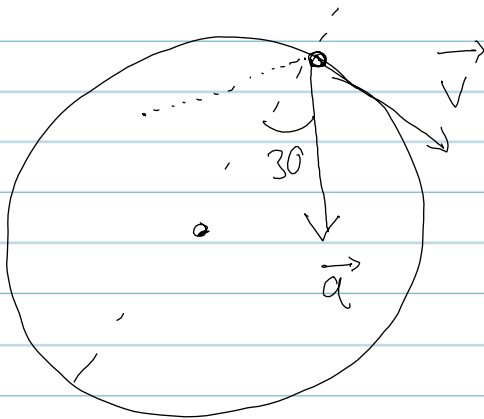
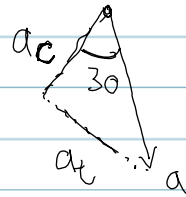


Non-const speed for circ. motion



$$|\vec{a}| = 15 \text{ m/s}^2$$



1. Describe: Direction of accⁿ vector is not radial
Particle is speeding up

2. Calculate a_c .

$$\begin{aligned} \Rightarrow a_c &= |\vec{a}| \cos \theta \\ &= 15 \times \frac{\sqrt{3}}{2} = \underline{13 \text{ m/s}^2} \end{aligned}$$

3. Find v . $a_c = v^2/r$
 $v = \sqrt{r a_c} = \underline{5.7 \text{ ms}^{-1}}$

4 Calculate a_t

$$a_t = |\vec{a}| \sin \theta = \underline{7.5 \text{ m/s}^2}$$

$$\underline{a} = \sqrt{a_c^2 + a_t^2}$$