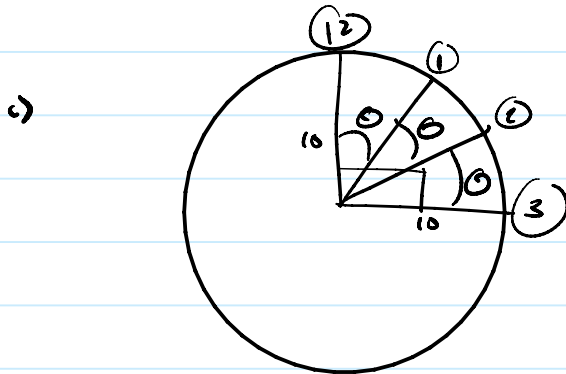


Practice test

Tuesday, October 6, 2020 11:31 AM

1. a) \odot . Each vector has an equal and opposite counterpart 6 hours later.
- b) The 8:00 vector since all other 6 cancel to \odot and 9:00 vector is equal and opposite to (now non-existent) 2:00 vector.



Quarter of circle divided into 3 sectors

$$\therefore \odot: \frac{90}{3} = 30^\circ$$

$$\begin{aligned} \therefore x \text{ pos at } 2:00 &= (\cos 30) 10 \text{ cm} = \frac{\sqrt{3}}{2} \cdot 10 = 5\sqrt{3} \text{ cm} \\ \therefore y \text{ pos at } 2:00 &= (\sin 30) 10 \text{ cm} = \frac{1}{2} \cdot 10 = 5 \text{ cm} \end{aligned}$$