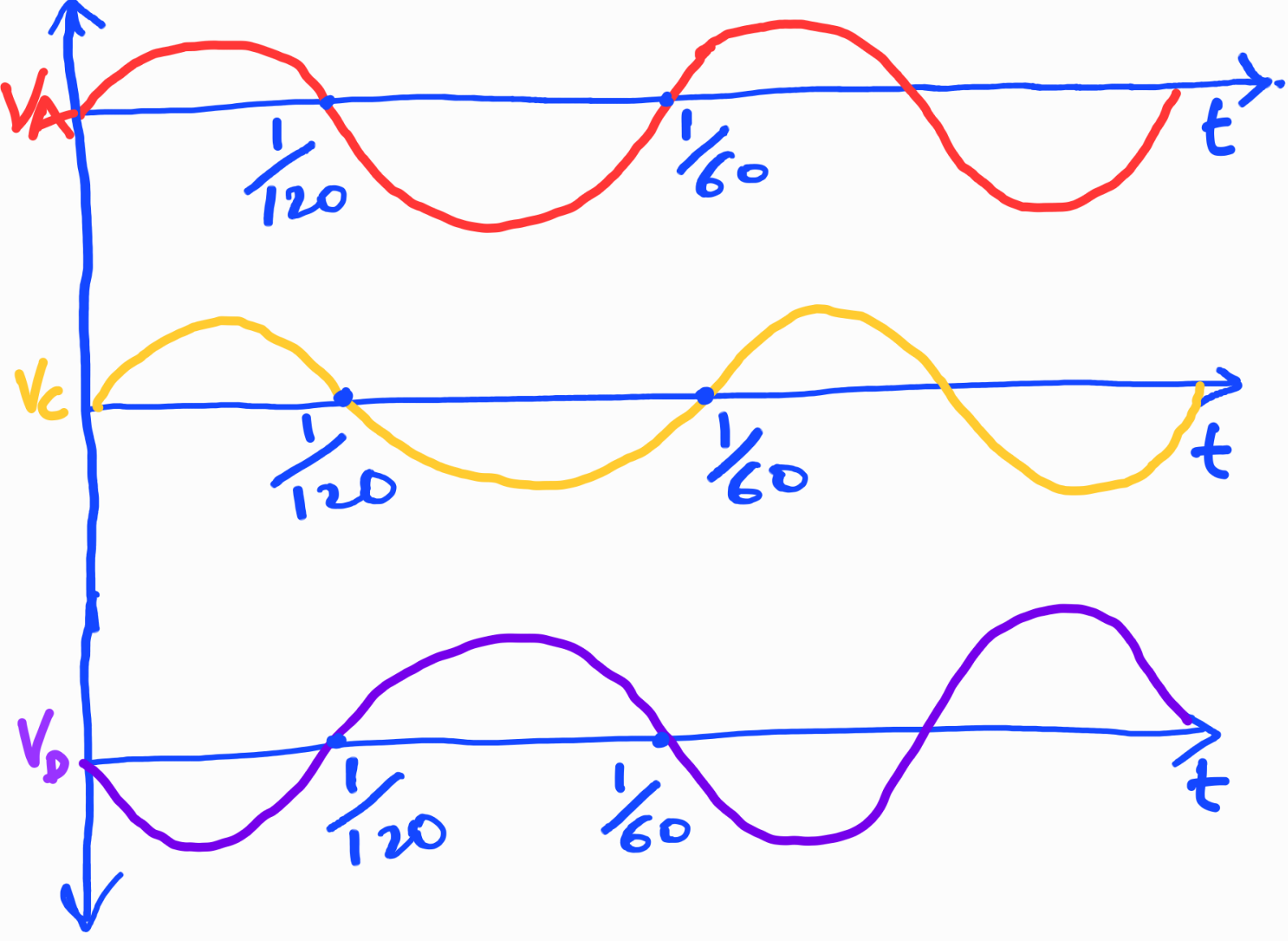



Theoretical Analysis for figure 6.3.

Waveform for node A in two cycles is in red.

Waveform for mode c is in yellow.

Waveform for mode D is in purple.

## PHASE RELATIONSHIPS.

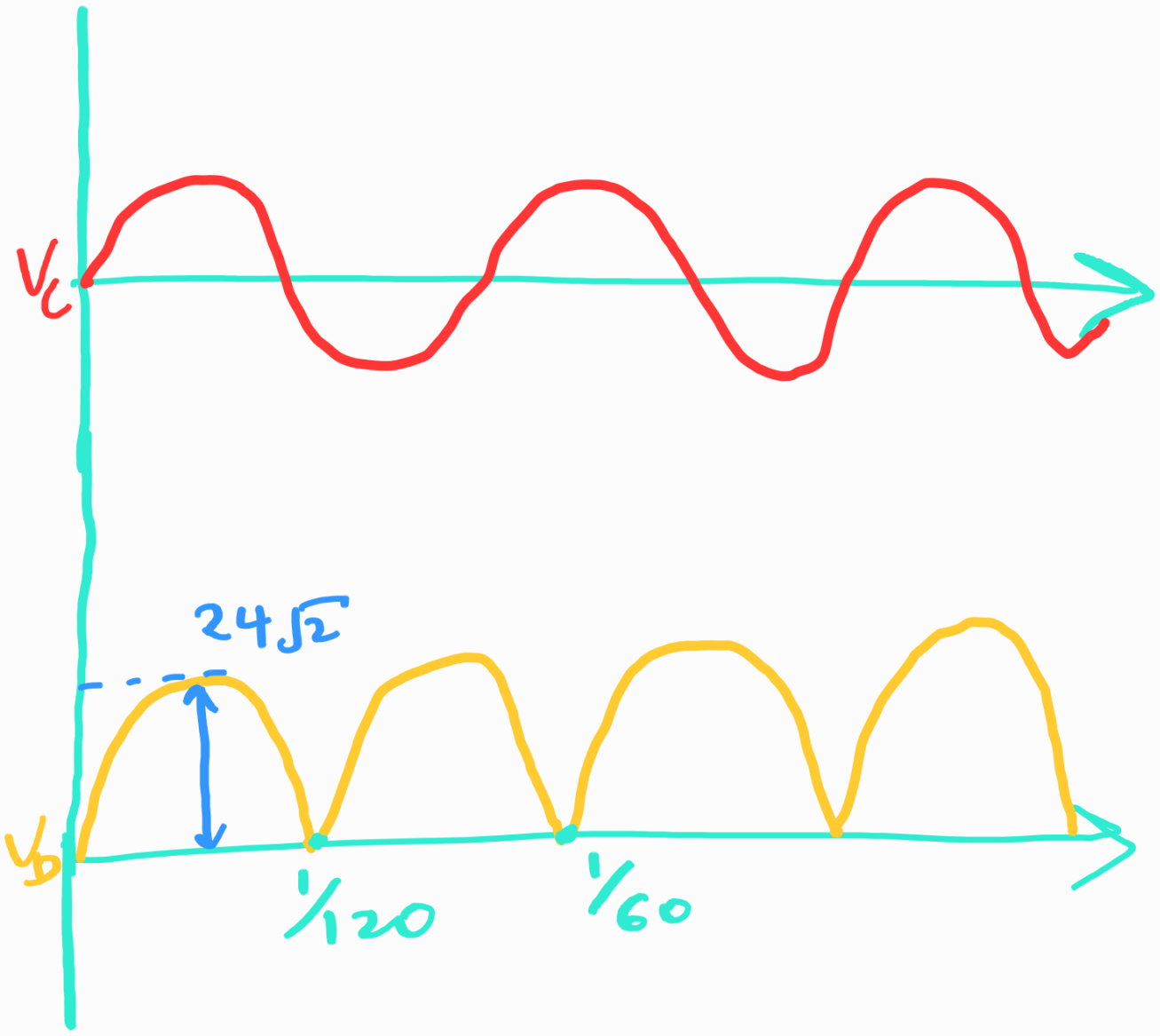
1. $\angle\theta A - \angle\theta C = 0^\circ$
2. $\angle\theta A - \angle\theta D = -180^\circ$
3. $\angle\theta C - \angle\theta D = 0^\circ$

- From A to C, voltages are in phase.

- From C to D, voltages are 180° out of phase.

## PART 2:

- For figure 6.4, Vout for a few cycles:



- DC value of Vout:

$$V_{out} = \frac{2 \cdot 24\sqrt{2}}{\pi}$$

$$= \frac{67.882}{\pi}$$

$$= \boxed{21.6\ V}$$

- Ripple frequency:

$$= \frac{1}{120} = \boxed{120\ Hz}$$