(a) Independent of what line-line voltage is given, the angular relationship between the three line-line voltages is ALWAYS the same.

i.e., referring to the illustration shown here, $V_{AB}$ always leads $V_{BC}$ by $+120^0$ and $V_{BC}$ always leads $V_{CA}$ by $+120^0$ — this is positive sequence (also referred to as $abc$ sequence) and is what you should always assume unless otherwise told differently. **The phasors rotate in a counter-clockwise direction as time increases.**

Also, the magnitudes of each of the voltages are the same.

Because this is a delta connected load, the corresponding phase current can be calculated directly from the given line-line voltage by using ohms law $\Rightarrow I_{ij} = V_{li} / Z_\phi$. Once the first phase current is found, then the other phase currents can be found in a fashion similar to that shown above for line-line voltages, i.e., $I_{AB}$ leads $I_{BC}$ by $120^0$ and $I_{BC}$ leads $I_{CA}$ by $120^0$. Must use Kirchoff’s Current Law (KCL) then to find the appropriate line current [$I_A = I_{AB} - I_{CA}$, $I_B = I_{BC} - I_{AB}$ and $I_C = I_{CA} - I_{BC}$].

(b) Power factor = $\cos$ (impedance angle) = $\cos$ (complex power angle) = $\cos$ (voltage angle – current angle); LEAD/LAG refers to current with respect to voltage. Thus if the impedance angle is positive, it means the current LAGS the voltage and thus is a lagging power factor (an inductive circuit). And if the impedance angle is negative, it means the current LEADS the voltage and thus is a leading power factor (a capacitive circuit).