Level 4 Aviation Review

- Terms they must understand: Boundary layer, Laminar flow, Chord, Wash-out, wing fencing slats, slots camber.
- Conventional airfoil generally is the thickest at 25% chord
- Colour on a Tachometer are similar to a traffic light, Red, Yellow, Green
- Review Pitot tube and Static tube. Airspeed (both), Altimeter (static), VSI (static)
- Density error in the ASI is cause by a decrease in density of the air as the altitude increases.
- Airspeed corrected for Compressibility is EAS
- When flying into a area of low (high to low) the altimeter will read HIGHER than the actual altitude.
- Density altitude is corrected for Temperature
- VSI measures the rate of change of static pressure.
- Precession is the tendency of a rotating body, when a force is applied to react 90 degree to the plan of rotation.
- Fuel selector value allow the pilot to select fuel from a desired tank and also shut of fuel
- Mach number is airspeed divided by the speed of sound.
- When the throttle move forward, the butterfly opens the throttle valve
- Two gauge for the engine is engine oil pressure and oil temperature
- The propeller procures Thrust
- The distance a propeller moves through one revolution is called Pitch
- Manifold pressure show atmospheric pressure when engine is not running.
- Power decrease as aircraft climbs
- Surface friction cause lower wind speed than would be expected from the pressure gradient
- An airmass has Temperature, moisture, and this is in the horizontal
- Katabatic wind is the flow of air down a hill
- Anabatic wind is the flow of air up a hill
- Gust are irregular wind chances
- Air masses are determined by Moisture, Cooling process, and Stability.
- Stable air are stratus type could, and poor visibility
- Unstable air are cumulus clouds and good visibility
- Cold air sink and warm are rises.
- A great circle is the shortest distance on the earth
- Variation is the angle before true heading and magnetic heading
- Compass heading is magnetic heading plus west deviation
- Isogonic lines are lines of equal Variation
- East / west headings on a compass will indicate a turn to the south when decelerating
- Meridians of longitude are semi-great circles
- Rhumb lines are flown when a pilot stays on a constant heading
- Agonic line is a line of ZERO variation
- Label a fuel system: Left tank, Right tank, Vent, Selector, primer, strainer, Carburetor

Radio Knowledge Review Notes:

- Always start a broadcast with your call sign, expect in an emergency (Mayday or Pan Pan)
- Mayday or Pan Pan spoken three time first, then your call sign three times
- Before transmitting you should always listen before broad casting
- ELT – is an emergency locate Beacon. These are equipped on all aircraft and after a crash they will transmit a varying tone heard on 121.5MHz
- Another emergency frequency is 243 MHz
- Radio station licence in Canada are through Industry Canada
- False distress calls could lead to fines up to $5000 and/or imprisonment
- The signal Mayday indicate distress. Example: Engine Fire.
- The signal Pan Pan indicate urgency. Example: passenger having a Heart attack
- For acknowledgement of mayday stat: Mayday aircraft in distress three times than 'this is' your call sign three times, Mayday out.
- Priority of distress by highest are distress, urgency, safety communication
- Conversation over the radio are treated very confidential
- Radio equipment eligible for licensing in Canada must be FCC approved
- It is prohibited to transmit false distress's, profane language, or superfluous communications
- Restricted Radiotelephone Operators Certificate is obtained through competence texting.
- Call signs in Canada start with a 'C' then have four letter after. The second letter is usually either am G or F. And example C-GAYE
- Review how to say numbers using radio terms: Wun, Too, Tree, Fow-er, Fife, Six, Sev-en, Ait, Nin-er, Zee-ro.
- Review: Over, Repeat, Rodger, and Affirmative. (Important to KNOW!)
- Review: Phonetic alphabet
- Pilot all us UTC time (Coordinated Universal Time)
- When testing transmission ensure no harmful interference and not to exceed 10 seconds