

## Objectives for MET Class #2

2Lt Lazaruk

- 1) "Pressure (weight of the air) decreases with height!" Remember that.
- 2) State the definition of a barometer and an altimeter. How are they related?
- 3) Tell me what the following means: "Hg"
- 4) Distinguish between AGL and ASL
- 5) Define reporting stations and explain the importance of altimeter settings for pilots
- 6) State the relationship between pressure, density and temperature
  
- 7) State the definition of an isobar. Can they cross? Are they always straight?
- 8) For a **low pressure system**, you must be able to:
  - a) state the direction that the air is moving around the system
  - b) is air moving in **or** out of the system? Convergence or Divergence?
  - c) remember that low pressure systems are associated with poor weather
- 9) For a **high pressure system**, you must be able to:
  - a) state the direction that the air is moving around the system
  - b) is air moving in **or** out of the system? Convergence or Divergence?
  - c) remember that high pressure systems are associated with good weather
- 10) Explain how reporting stations track the movement of pressure systems.
- 11) For **pressure gradients**, you should be able to state:
  - a) the definition of a pressure gradient
  - b) the relationship between isobars and the pressure gradient (steep vs. shallow)
  
- 12) State the definition of wind and how winds flow (from where to where).
- 13) Understand why wind follows a figure 8 pattern from a **H -> L**
- 14) Explain why surface friction **both** slows down wind and changes its direction.
- 15) Understand why air moves faster and with the isobars up at altitude and why air moves slower and against the isobars near the surface of the Earth.
- 16) State the effect of Coriolis Force on moving air.
- 17) State Buys Ballot's Law
- 18) Distinguish between Sea Breezes and Land Breezes
- 19) Briefly explain why surface winds are faster during the day and slower at night.
- 20) State the difference between a gust and a squall
- 21) Distinguish between veering and backing winds. What can you expect the winds to do as you're departing an airport? Arriving?
- 22) Define wind shear. Why is it important for pilots? When is wind shear the biggest concern for pilots?