

### DA vs MDA

DA = Landing is possible (not assured) or go missed right away

MDA = Landing is possible (not assured) or level off

VDP distance = (MDA - TDZE) / 300

### VORs

FROM R -, FROM L +, TO R +, TO L -

Single VOR **air** check +/- **6°**, Single VOR **ground** check +/- **4°**, Dual VOR air check +/- **4°**

VOT all signals FROM R360 (from the north), TO R180 (to the south) +/- **4°**

91.171 (d) **D**ate, place (**L**ocation), bearing **E**rror, and **S**ign the aircraft log or other record SLED

### § 91.169 1-2-3 Alternate Rule for Filing Flight Plan

For +/- **1** hour, if less than **2000** feet and/or **3** SM visibility then you need an alternate

Alternate must have VFR, 600/2 for precision, or 800/2 for non-precision

When you **arrive** at the alternate, the minimums can be approach minimums

Need to check for non-standard alternate minimums at alternate

IFR Fuel For destination, then alternate, then 45 minutes

### Standard Rate Turns

Standard rate is 1 minute 180 deg...3 degree per second

If speed increases, then bank angle must increase

### Climb Rate

(Ground Speed/60) x ft per NM req = climb rate needed

Example: 120 kts is 2 NM/min x 435 ft/NM = 870 ft/min

Standard: is 200 ft/NM to 400 ft but check ODPs/SIDs...if not able req VCOA

### § 91.177 Minimum altitudes for IFR operations

Mountainous area **2,000** feet above the highest obstacle within a horizontal distance of **4** NM

Otherwise, **1,000** feet above the highest obstacle within a horizontal distance of **4** NM

### § 91.185 Comm failure

Altitude: **Minimum** on chart **Expected Assigned**      Route: **Assigned Vectored Expected Filed**

Nav equipment errors ILS GS error => use LOC mins use MDA...GPS error => exec MAP

### Glide Slope/Path

You are below glide slope one or two dots -> level off till back on slope

You are above glide slope one or two dots -> pitch and power down

### § 91.175 Takeoff and landing under IFR.

(c)(3)(i) The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.