

## Aviation Formulas

### **Schedule**

Ground instruction – 5 minutes

### **Material**

#### Cloud Bases

$(\text{Temp in C} - \text{Dew Point } ^\circ\text{C}) / 2.5 * 1000 = \text{AGL}$

$(\text{Temp in C} - \text{Dew Point } ^\circ\text{C}) * 400 = \text{AGL}$

$(\text{Temp in F} - \text{Dew Point } ^\circ\text{F}) / 4.4 * 1000 = \text{AGL}$

#### Standard Turns

360 degrees -> 2 min

180 degrees -> 1 min

30 degrees -> 10 sec

3 degree -> 1 sec

#### Celsius to Fahrenheit

$((9 * ^\circ\text{C}) / 5) + 32 = ^\circ\text{F}$

$(9/5 * ^\circ\text{C}) + 32 = ^\circ\text{F}$

#### Lapse Rates

Standard air is  $-2^\circ\text{C} / -3.5^\circ\text{F}$  per 1000' increase in altitude

Dry air is  $-3^\circ\text{C} / -5.4^\circ\text{F}$  per 1000' increase in altitude

#### Fuel Needed

$(\text{Distance in NM} / \text{Speed in kts}) * \text{gal/hr} = \text{gallons needed}$