

CFI Bootcamp

Flight Instructor Training

Welcome to the
Bootcamp+ Network
Pilot Training

Today's Bootcamp+ Network Programming

What's on for Today?



Live Show – 1st Hour – Wings Credit

Open Mic – 2nd Hour – End

Monitor the Chat – Links/Info

Wings Credit - End of the Live Show

CFI Bootcamp

Flight Instructor Training

Aerodynamics

The Four Forces

How an Airplane Flies

The Four Forces

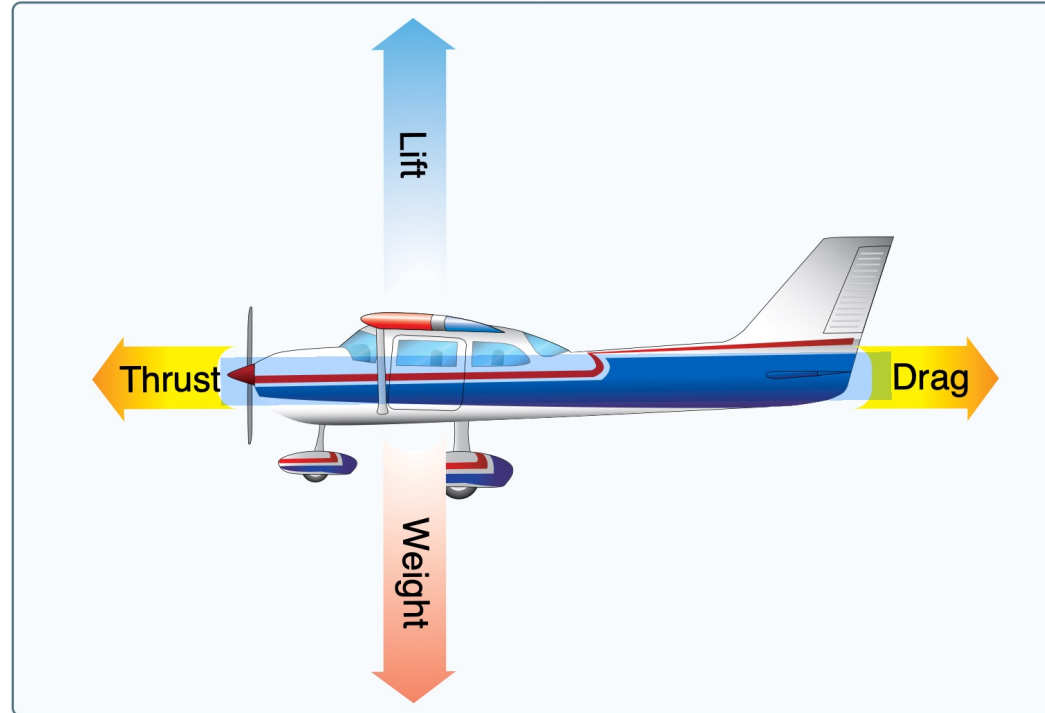
What are they?

Lift

Weight

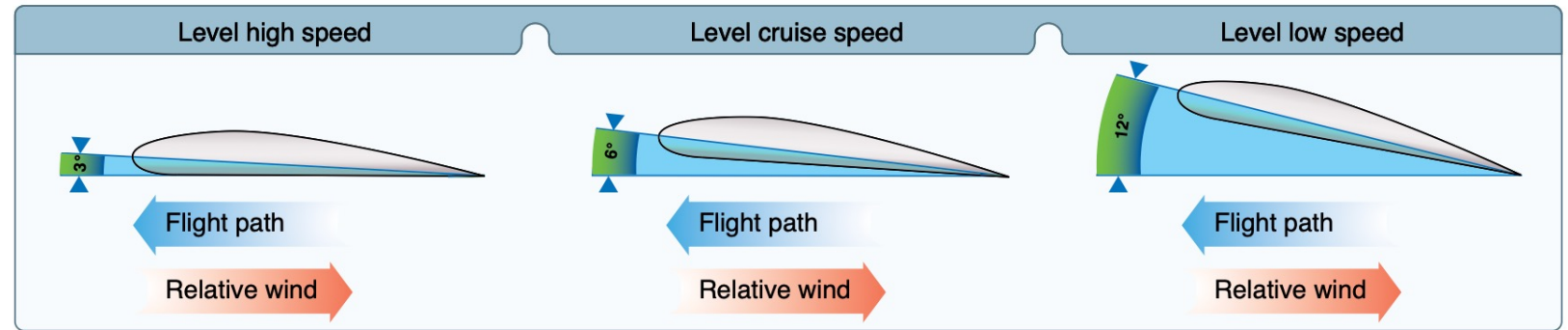
Thrust

Drag



The Four Forces

Angle of Attack



Opposite to the flight path
Increases the speed of the air
Lowers the pressure

The Four Forces

Production of Lift

Angle of Attack

Air Density

Velocity

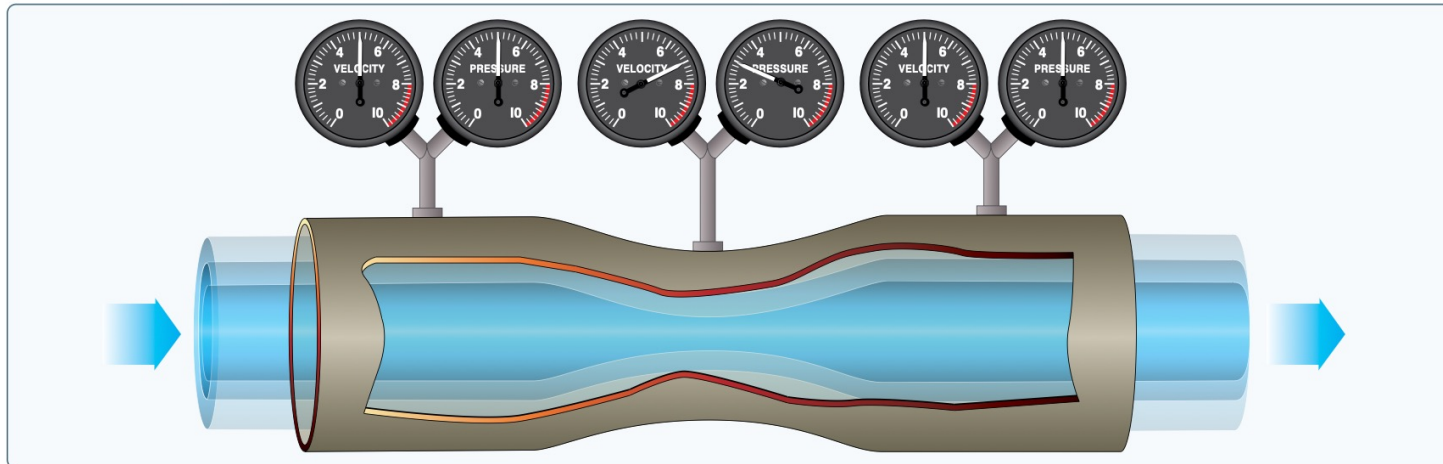
Wing Surface Area

$$L = C_L \frac{\rho V^2 A}{2}$$

The Four Forces

Production of Lift

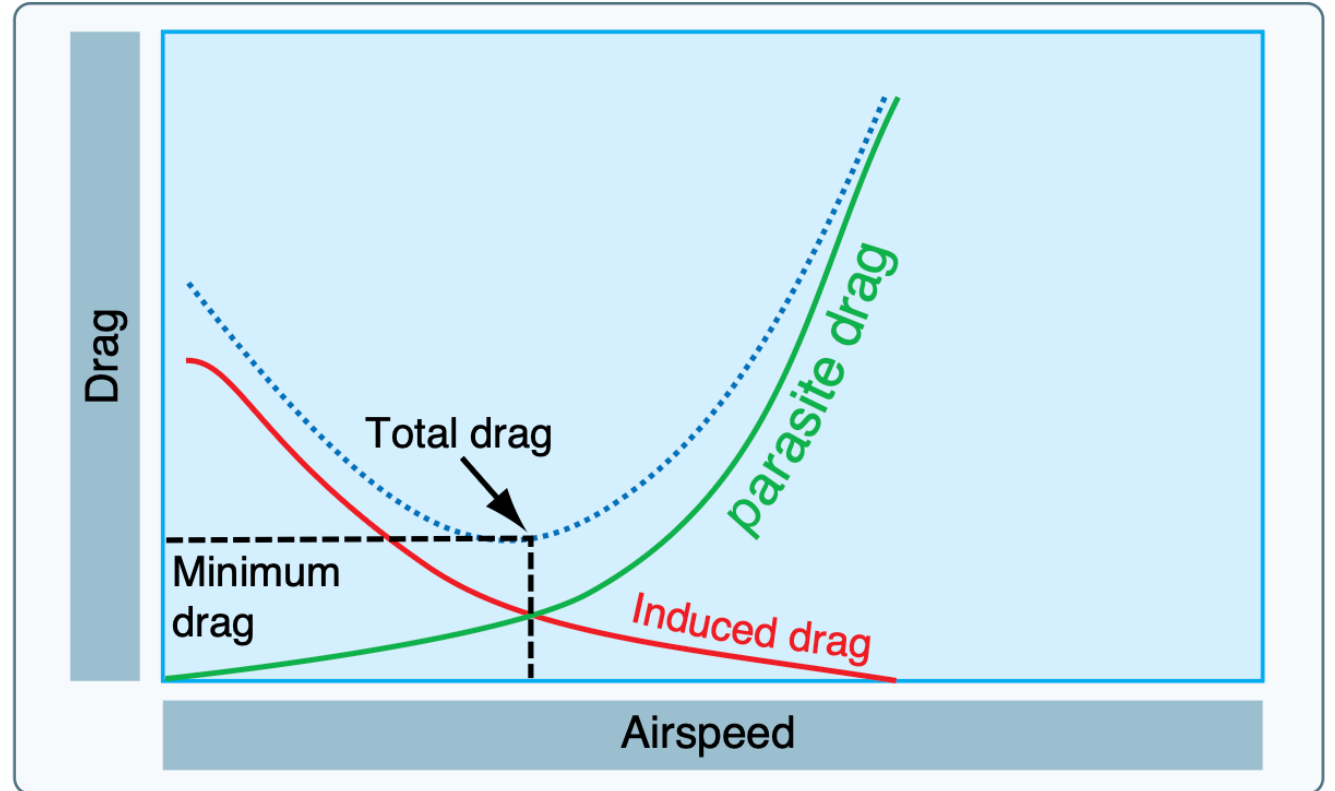
PV relationship - constant
Higher V lowers the pressure



The Four Forces

Drag

Form or Parasite drag
Increases with speed



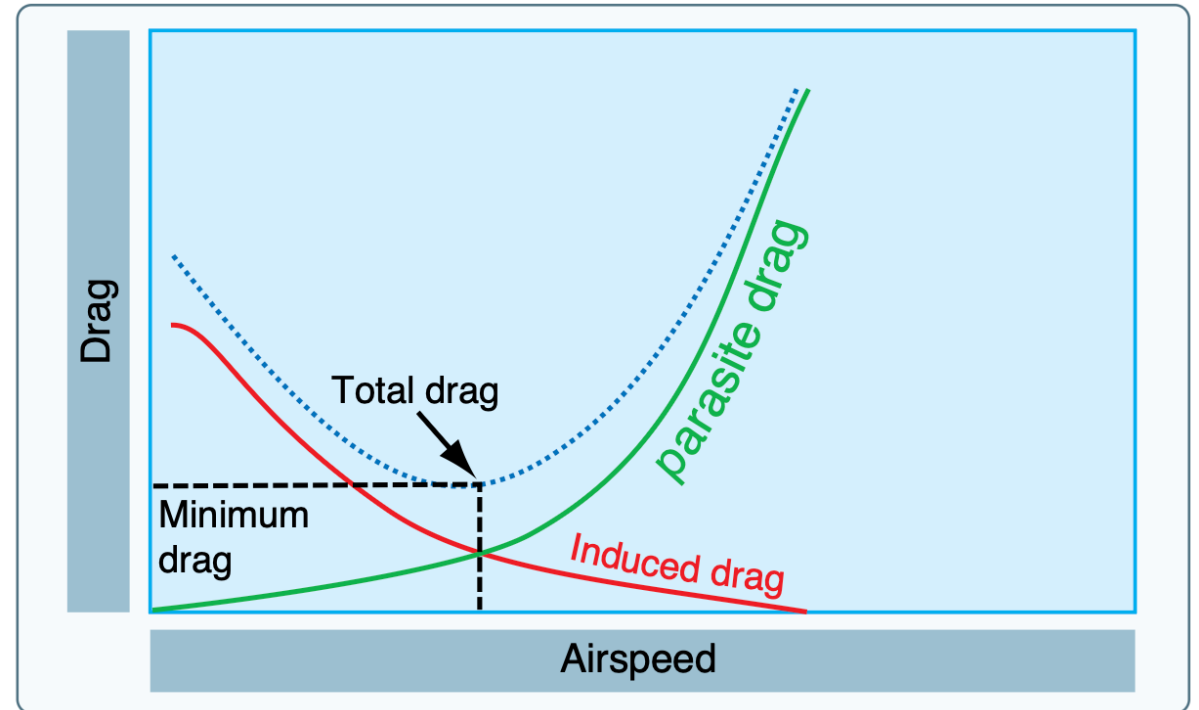
The Four Forces

Drag

Induced drag - lift

Increases AOA

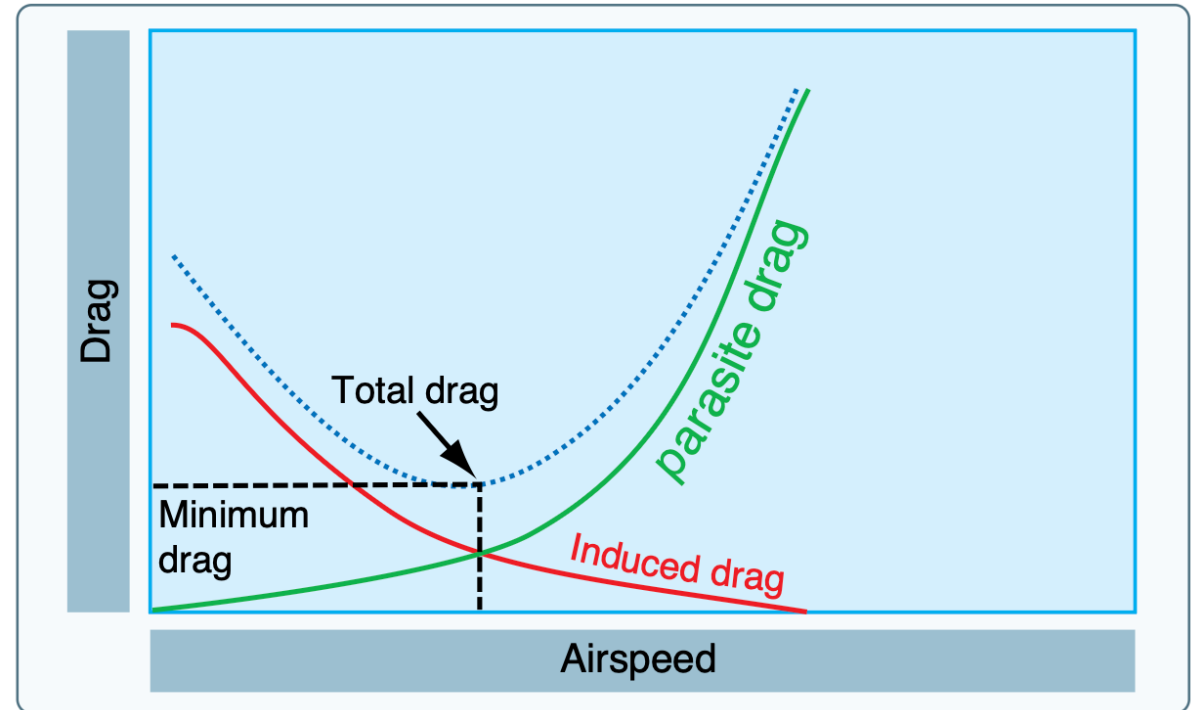
Increases as speed lowers



The Four Forces

Drag

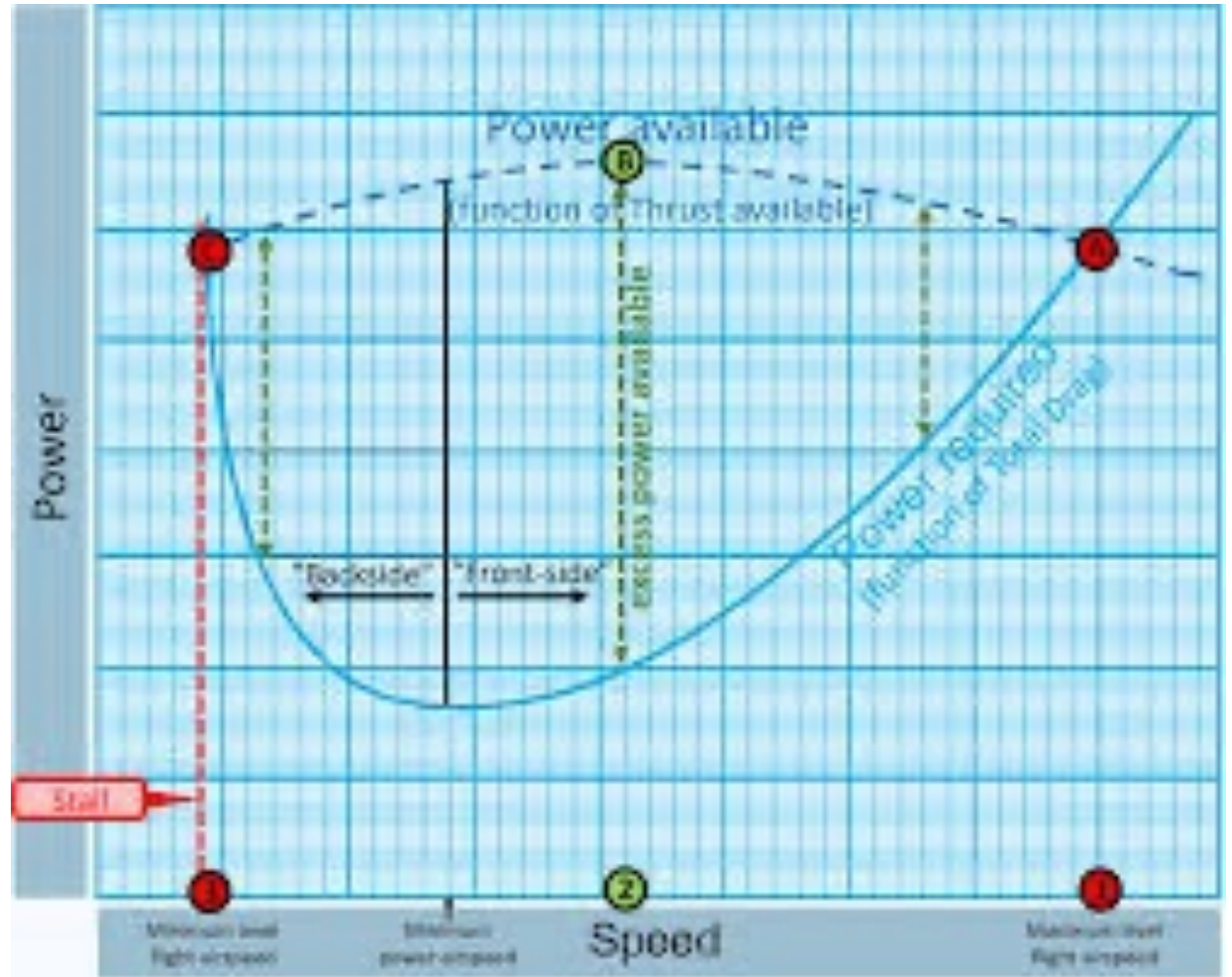
Point of lowest drag



The Four Forces

Power Required/Available

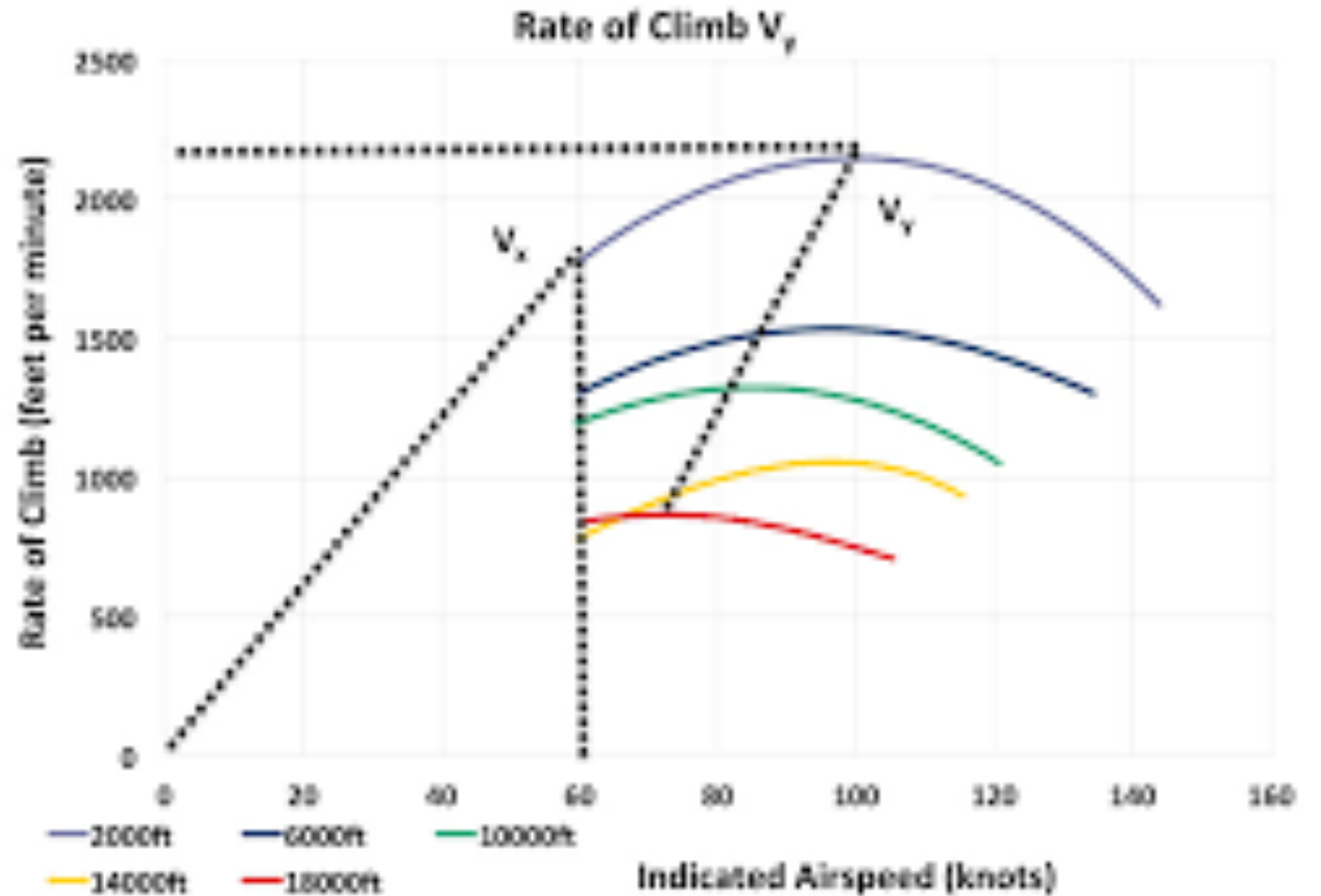
Point of lowest drag



The Four Forces

Best Angle of Climb

Steepest angle
Varies with GS



The Four Forces

Reality



Special Announcement!

Reminders!



CFI Study Group on FaceBook

Join SAFE and the Facebook CFI Study Group by Clicking on the Images Above

CFI Bootcamp
Flight Instructor Training