Density Altitude

Density Altitude = Pressure Altitude corrected for non-standard temperature.

High DA → thinner air → reduced lift, thrust & propeller efficiency.

Quick Formula

DA ≈ PA + 120 × (OAT – ISA temp)

ISA temp at altitude = 15°C – 2°C per 1000 ft PA

Example (EDWX: 1500 ft, QNH 1005, OAT +28°C)

PA ≈	1500 + (1013–1005)×27 = 1716 ft
ISA at PA ≈	15 – 3.4 = 11.6°C
DA ≈	1716 + 120×(28–11.6) = 3685 ft

Rules of Thumb

DA > 5000 ft → expect noticeably longer take-off roll

Hot & high = density altitude danger

Always use DA (not elevation) when reading POH charts