

N9704Y - SPEED CALCULATIONS

The airplane's ground speed and heading were obtained using the radar track data for the following 5 locations along the route of flight.

Location # and Lat/lon	Heading	Ground Speed	altitude
1, 33.9456, -80.6828	254 true	134 kts	8000 ft
2, 32.9244, -83.1705	240 true	132 kts	8000 ft
3, 32.2163, -86.1771	270 true	128 kts	8000 ft
4, 32.4937, -87.8970	281 true	121 kts	6000 ft
5, 32.9179, -90.6124	281 true	129 kts	6000 ft

Three winds aloft readings along the flight route were provided by an NTSB meteorologist as follows:

Location	Wind Speed	Wind Direction	Altitude
33.7875 -81.4308	11 kts	312 true	7700 ft
32.1889 -84.7453	15 kts	244 true	7700 ft
32.5817 -88.3928	21kts	314 true	6000 ft

An E6-B slide type flight computer was used to determine the airplane's true airspeed. The results are as follows:

Using A/C location #1 and winds aloft data #1, A/C TAS = 140 kts
Using A/C location #2 and winds aloft data #1, A/C TAS = 135 kts
Using A/C location #2 and winds aloft data #2, A/C TAS = 147 kts
Using A/C location #3 and winds aloft data #2, A/C TAS = 142 kts
Using A/C location #4 and winds aloft data #3, A/C TAS = 139 kts
Using A/C location #5 and winds aloft data #3, A/C TAS = 147 kts

The average of the above calculated speeds is 142 kts