

Computer Questions (Revised 2007-12-27)

NOTE: The following abbreviations are used in this text.

- |     |   |                |     |   |                    |
|-----|---|----------------|-----|---|--------------------|
| SM  | - | Statute Miles  | TAS | - | True Airspeed      |
| MPH | - | Miles Per Hour | IAS | - | Indicated Airspeed |
| NM  | - | Nautical Miles | GS  | - | Ground Speed       |
| KTS | - | Knots          | GPH | - | Gallons Per Hour   |
| TH  | - | 'True Heading' | PA  | - | Pressure Altitude  |
| TC  | - | True Course    | C   | - | Centigrade         |

CONVERSIONS

- |    |         |       |     |    |         |       |     |
|----|---------|-------|-----|----|---------|-------|-----|
| 1. | 45 SM   | _____ | NM  | 5. | 80 SM   | _____ | NM  |
| 2. | 105 KTS | _____ | MPH | 6. | 130 MPH | _____ | KTS |
| 3. | 160 MPH | _____ | KTS | 7. | 20 KTS  | _____ | MPH |
| 4. | 250 NM  | _____ | SM  | 8. | 110 NM  | _____ | SM  |

	<u>TIME</u>	<u>SPEED</u>	<u>DISTANCE</u>
9.	1:32	114 MPH	_____
10.	3:40	120 KTS	_____
11.	_____	133 MPH	82 SM
12.	:32	_____	57 MN
13.	1:12	_____	200 NM
14.	_____	104 KTS	84 SM
15.	_____	152 MPH	320 NM
16.	2:12	127 KTS	_____
17.	:47	_____	80 NM
18.	1:35	118 KTS	_____
19.	_____	95 KTS	19 NM
20.	:21	_____	70 NM

FUEL CONSUMPTION

- |     |                                    |       |               |
|-----|------------------------------------|-------|---------------|
| 21. | 38 gal. fuel used in 1:57          | _____ | GPH           |
| 22. | 2:10 flight, fuel used at 11.6 GPH | _____ | Fuel Required |
| 23. | 17 gal. fuel used in 1:20          | _____ | GPH           |
| 24. | 45 gal. .capacity, used at 8.3 GPH | _____ | Endurance     |
| 25. | 22 gal. capacity, used at 6.7 GPH  | _____ | Endurance     |
| 26. | 1:32 flight, fuel used at 14.5 GPH | _____ | Fuel Required |

Written Originally by Dale Kuhns  
Inherited on 2007-04-15 and revised by Godfrey D. Watson

TRUE AIRSPEED

	<u>ALTITUDE</u>	<u>TEMP</u>	<u>IAS</u>	<u>TAS</u>
27.	7000'	0	130 kts	_____
28.	3000'	+20°C	158 MPH	_____
29.	11,000'	-20°C	115 KTS	_____
30.	8,000'	+15°C	105 KTS	_____

DENSITY ALTITUDE

	<u>ALTITUDE</u>	<u>TEMP</u>	<u>DENSITY ALTITUDE</u>
31.	6000'	+10°C	_____
32.	4000'	+20°C	_____
33.	7000'	+5°C	_____
34.	10,000'	-15°C	_____

GROUNDSPEED AND TRUE HEADING

35. GIVEN: TC – 345°  
TAS – 95 MPH  
Wind – 035° / 15 KTS
- FIND: TH \_\_\_\_\_  
GS \_\_\_\_\_
36. GIVEN: TC – 135°  
TAS – 120 MPH  
Wind – 190° / 20 KTS
- FIND: TH \_\_\_\_\_  
GS \_\_\_\_\_
37. GIVEN: TC – 210°  
TAS – 114 MPH  
Wind – 045° / 18 KTS
- FIND: TH \_\_\_\_\_  
GS \_\_\_\_\_

FINDING WIND DIRECTION AND VELOCITY  
(OPTIONAL—NOT REQUIRED, NOT GRADED)

38. GIVEN: TC – 080°  
TH – 074°  
TAS – 138 KTS  
GS – 126 KTS
- FIND: WIND \_\_\_\_\_
39. GIVEN: TC – 315°  
TH – 322°  
TAS – 105 KTS  
GS – 114 KTS
- FIND: WIND \_\_\_\_\_
40. GIVEN: TC – 135°  
TH – 125°  
TAS – 122 KTS  
GS – 113 KTS
- FIND: WIND \_\_\_\_\_

COMPOSITE PROBLEMS  
(REQUIRED, GRADED)

41. GIVEN: TC – 235°  
IAS – 120 MPH  
Wind – 340°/25 KTS  
Distance – 277 NM  
Fuel Consumption – 10.7 GPH  
Altitude – 6000 ft.  
Temperature – +10° C  
TAS – \_\_\_\_\_
- FIND: TH \_\_\_\_\_  
GS \_\_\_\_\_  
Time Enroute \_\_\_\_\_  
Fuel to reach destination \_\_\_\_\_
42. GIVEN: TC – 045°  
IAS – 130 KTS  
Wind – 180°/18 KTS  
Distance – 430 SM  
Fuel Consumption – 15.4 GPH  
Altitude – 9000 ft.  
Temperature – +15° C  
TAS – \_\_\_\_\_
- FIND: TH \_\_\_\_\_  
GS \_\_\_\_\_  
Time Enroute \_\_\_\_\_  
Fuel to reach destination \_\_\_\_\_
43. GIVEN: TC – 275°  
IAS – 127 MPH  
Wind – 160°/30 KTS  
Distance – 188 NM  
Fuel Consumption – 8.7 GPH  
Altitude – 5000 ft.  
Temperature – -20° C  
TAS – \_\_\_\_\_
- FIND: TH \_\_\_\_\_  
GS \_\_\_\_\_  
Time Enroute \_\_\_\_\_  
Fuel to reach destination \_\_\_\_\_

BONUS—5 points

44.

196. (ASA 3549)

H983

PVT

(Refer to figure 24 of FAA-CT-8080-2E, 2004.) What is the estimated time en route for a flight from Claxton-Evans County Airport (area 2) to Hampton Varnville Airport (area 1)? The wind is from 290° at 18 knots and the pressure altitude is 5,000 feet, temperature is 59°F, density altitude is 6,000 feet, and indicated airspeed (calibrated airspeed) is 78 knots. Add 3 minutes for climb-out.

- A) 36 minutes.
- B) 40 minutes.
- C) 45 minutes.