Homework 13

Study Questions

Commercial AVF 221

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_ Score\_\_\_\_\_

**TIME, SPEED AND DISTANCE**

**SPEED TIME DISTANCE**

1. 125 KTS \_\_\_\_\_ 524 NM

2. \_\_\_\_\_ 2:30 345 NM

3. 110 KTS 1:40 \_\_\_\_\_

4. \_\_\_\_\_ 0:24 44 NM

5. 95 KTS 1:24 \_\_\_\_\_

6. 90 KTS \_\_\_\_\_ 1005 NM

**FUEL CONSUMPTION**

**GPHOUR TIME TOTAL USED**

1. 7.8 3:20 \_\_\_\_\_

2. \_\_\_\_\_ 4:50 62

3. 8.5 \_\_\_\_\_ 38

4. 10 2:30 \_\_\_\_\_

5. 12 \_\_\_\_\_ 22

**DISTANCE CONVERSION**

**NAUT STAT KM**

1. 20 \_\_\_\_\_ \_\_\_\_\_

2. \_\_\_\_\_ 48 \_\_\_\_\_

3. \_\_\_\_\_ \_\_\_\_\_ 110

**AIRSPEED CONVERSION**

**PRESSURE DENSITY**

**ALTITUDE TEMP CAS TAS ALTITUDE**

1. 14,000 5°C 160 \_\_\_\_\_ \_\_\_\_\_

2. 20,000 -20°C 200 \_\_\_\_\_ \_\_\_\_\_

3. 8,000 15°C 150 \_\_\_\_\_ \_\_\_\_\_

**ALTITUDE CORRECTION**

**INDICATED/**

**PRESSURE CALIBRATED STATION TRUE**

**ALTITUDE ALTITUDE TEMP ALTITUDE ALTITUDE**

1. 10,500 10,000 -20°C 5,000 \_\_\_\_\_

2. 12,000 11,000 -30°C 3,000 \_\_\_\_\_

3. 8,000 7,600 -15°C (unknown) \_\_\_\_\_

**FEET/MILE VS. FEET/MINUTE**

**GROUND FEET PER MILE FEET PER**

**SPEED REQUIRED MINUTE**

1. 120 350 \_\_\_\_\_

2. 100 250 \_\_\_\_\_

3. 150 300 \_\_\_\_\_

**WIND**

**TRUE**

**WIND WIND TRUE TRUE GROUND**

**DIREC. VELOCITY COURSE TAS HDG SPEED**

1. 240 38 300 165 \_\_\_\_\_ \_\_\_\_\_

2. 040 43 150 140 \_\_\_\_\_ \_\_\_\_\_

3. 330 25 020 80 \_\_\_\_\_ \_\_\_\_\_

4. 110 18 260 225 \_\_\_\_\_ \_\_\_\_\_

**AIRBORNE WIND**

**TRUE TRUE GROUND WIND WIND**

**HDG COURSE TAS SPEED DIREC. VELOCITY**

1. 320 315 140 128 \_\_\_\_\_ \_\_\_\_\_

2. 175 160 150 115 \_\_\_\_\_ \_\_\_\_\_

Kershner Chapter 17

Kershner has 20 problems listed, read the instructions and work through them. Check your answers which are given on the last page of the chapter.

PHAK Chapter 16

1. What is the wing tip bearing change time-distance check formula for time?
2. What is the wing tip bearing change formula for distance?
3. Draw a diagram of the wing tip bearing change method, representing a 10° bearing change
4. Explain the isosceles triangle method for determining time/distance to the station
5. Draw a diagram representing a 10° angle for the isosceles method.
6. What is the rule of 60?
7. Plan a cross country from MWH to Rosalia (72S) and back in Bonanza 82964. All appropriate boxes must be filled.

Wind @ 5,500 and 4,500 is 230 true @ 25kts

Temp @ 5,500 is -14°C, Altimeter setting 29.92

Magnetic deviation to 72S is +2, to MWH is -2

Bonanza takeoff weight 3,200lbs, full tanks

Use a power setting of 22” MAP and 2300 rpm (65% power)

Include time, fuel and distance to climb in the pilot notes section

Switch tanks at Rosalia

Time off MWH is 1800 zulu

10 minutes for touch and go at 72S

