UMFO VNAV FTI - 2015

Chapter 4 Answer Key

1. Determine appropriate standard course corrections for each situation. Assume no wind conditions, base airspeed of 175 knots and at least 6 minutes remaining on each leg.

	BASE HEADING	DISTANACE OFF COURSE (NM)	TURN TO HEADING	CORRECTION DURATION
a.	012	2 RIGHT	**002/352**	**4+00/2+00**
b.	327	1 ½ LEFT	**337/357**	**3+00/1+00**
c.	154	1 RIGHT	**144/134**	**2+00/1+00**
d.	225	2 LEFT	**235/245**	**4+00/2+00**
e.	349	3 LEFT	**359/009/019**	**6+00/3+00/2+00**
f.	164	½ RIGHT	**154**	**1+00**
g.	048	1 LEFT	**058/068**	**2+00/1+00**
h.	273	2 ½ RIGHT	**263**	**5+00**

2. Determine appropriate standard speed correction and the time the correction should be taken out. Assume no wind conditions and base airspeed of 175 knots.

	PREFLIGHT TIME OF ARRIVAL	ACTUAL TIME OF ARRIVAL	TIME IN	RECOMMENDED AIRSPEED	TIME OUT
a.	5+10	5+26	5+50	**195**	**8+30**
b.	6+50	6+23	6+25	**155**	**10+55**
c.	7+50	8+07	8+20	**195**	**11+10**
d.	8+10	8+35	8+35	**195**	**12+45**
e.	9+15	9+39	10+00	**195**	**14+00**
f.	10+50	10+28	10+40	**155**	**14+20**
g.	11+35	11+25	11+40	**175**	**UPDATE ETA**
h.	12+35	13+05	13+20	**195**	**20+00**

3. Determine appropriate wind compensations for each situation. Assume base airspeed of 180 knots.

	MAGNETIC COURSE	WIND	COMPENSATED HEADING	COMPENSATED AIRSPEED
a.	001	300/15	**357**	**185**
b.	232	200/15	**230**	**190**
c.	338	130/15	**340**	**170**
d.	185	270/20	**193**	**180**
e.	118	160/20	**124**	**195**
f.	151	100/30	**143**	**200**
g.	294	250/10	**292**	**185**
h.	127	310/10	**127**	**170**

4. Determine crosswind component and new compensated heading. The elapsed time shown is the time since the aircraft was last known to be on course. Assume no wind compensations during leg duration and 180 knots base airspeed.

	BASE COURSE	ELAPSED TIME	DISTANACE OFF COURSE (NM)	CROSSWIND COMPONENT	COMPENSATED HEADING
a.	335	3+00	½ RIGHT	**10**	**331**
b.	017	3+00	1 LEFT	**20**	**025**
c.	121	6+00	1 ½ RIGHT	**15**	**115**
d.	242	6+00	3 LEFT	**30**	**254**
e.	352	9+00	1 ½ LEFT	**10**	**356**
f.	154	4+00	1 LEFT	**15**	**160**
g.	286	5+00	2 RIGHT	**24 (6 min rule = 20)**	**276 (6 min rule = 278)**
h.	233	8+00	2 LEFT	**15**	**239**