Dead Reckoning & Estimated Position Exercise.

Q1 Maritime Time Zones are written as TZ ± HHMM
The figure shows what must be done to "local time" to get the time in UT
eg 1530 (TZ -0100) is 1530 − 0100 = 1430 UT

Q2 The ISO standard for describing Time Zones is ISO 8601. This shows the TZ for an area as UT ± HH.

Q3 (a)
1723 SPDST
-0100 Daylight Saving
1623 SPST
-0100 Time Zone
1523 UT

(b)
2000 DST
-0100 Daylight Saving.
1900 UT

Q4 ~~DR~~ Convert 350°C to True. ⇒ 340T

C	D	M	V	T
350	-4W	346	-6W	340

DR Posn is 45° 55.5' N / 005° 51.32' W

Q5 Convert 270°C to True ⇒ 260T.

C	D	M	V	T
270°	-4W	266	-6W	260

Q5 cont.

Sunday 23 June — Victoria

HW 0850 UT / 0950 DST / 1050 SP DST 5·3 m
LW 1503 UT / 1603 DST / 1703 SP DST 0·9 m
Range = 4·4 m.

◇ K HW+4 291 T 2·0 Sp / 1·1 Np
Int for 4·4 m range = 1·8 km
For 30 mins = 1·8 ÷ 2 = 0·9 M

HW 1050 SP DST
+1 1120
+2 1220
+3 1320
+4 1420
+5 1520
1620
1450
1550

AW+5 298 T 3·3 Sp / 1·7 Np
Int for 4·4 m range = 3·0 km.
For 30 mins = 3·0 ÷ 2 = 1·5 M

EP from plot
= 45° 55·8' N / 005° 50·26 W

Q6(a) Convert Water track from °C to °T.

C	D	M	V	T
300	−5W	295	−6W	289 T

Saturday 12 October. — Victoria.
HW 1425 UT / 1525 DST / 1625 SP DST 5·0 m
LW 0811 UT / 0911 DST / 1011 SP DST 1·6 m
Range = 3·4 M

HW 1625
−1 1555
−2 1455
−3 1355
1255

1355 to 1455 = HW−2, 1455 to

◇ N HW−2 129° 4·5 Sp / 2·3 Np. Int = 3·2 kn
30 mins = 3·2 ÷ 2 = 1·6 M

Q6 (cont)
EP = 45° 48.5'N / 005° 49.55'W

(b) COG = 253°T SOG = 10.2 kn.

Q7 Converting Compass course steered to True Water Track.

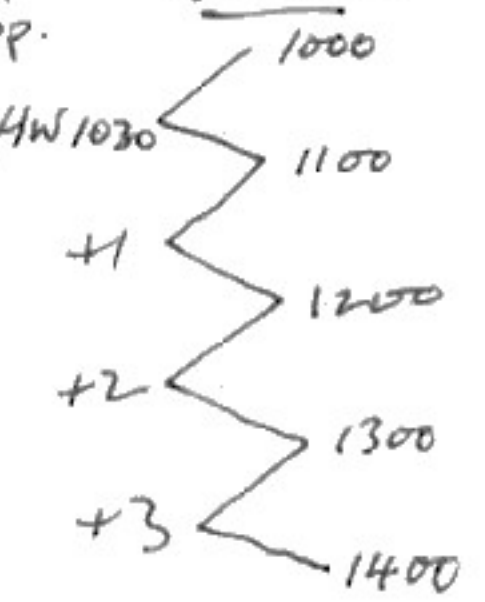
C	055	135	055
D	+1E	+6E	
M	056	141	
V	-6W	-6W	
T	050	135	
L/W	-5	+5	
Water track	045°T	140°T	045°T

Tuesday 2b February
Victoria
HW 0930 UT / 1030 (TZ-0100) 5.5m
LW 1545 UT / 1645 (TZ-0100) 0.6m
Range = 4.9m Sp.

1200 - 1300 = HW+2 1300 - 1330 = HW+3

◇ Q HW+2 163° 1.6Sp / 0.8Np.
◇ Q HW+3 014° 1.4Sp / 0.7Np.

TZ-0100 / 1000



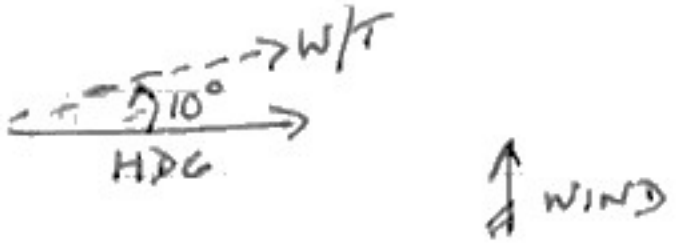
From plot, applying tide after laying off the three legs:

EP = 45° 41.6'N / 005° 36.2'W

Q8. Converting Compass heading to True water track.

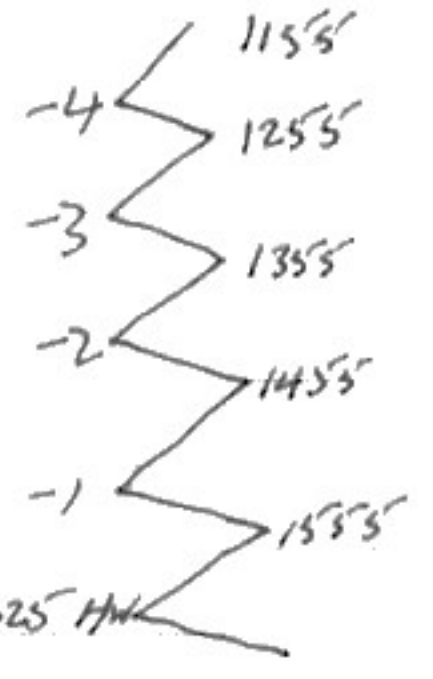
C	D	M	V	T	L/W	Water Track
090	+4E	094	-6W	088	-10	078 T

Leeway



Saturday 12 October - Victoria

HW 1425 ut / 1625 SPDST / 1625 SPDST 5.0
LW 0811 ut / 0911 SPST / 1011 SPDST 1.5
RANGE = 3.5m.



1455 - 1555 SPDST = HW-1

◇ K HW-1 110° 3.2 Sp / 1.7 Np Tmt = 2-3kn / 1625 HW

(a) From plot: 1555 EP → 45° 53.7'N 005° 36.1' W

(b) COG = 087°T SOG = 7.4 kn.