Coastal Skipper Questions and Answers New Charts

Charts

1. What are the latitude and longitude of the dots at the centre of the two most northern compass roses on Chart 3?

Find the following positions on Chart 4. At each point place a cross with the number of the question (we will use these points again later). You will find a feature at each point, look it up in 5011, and identify each symbol. Features that are of navigational importance, such as buoys, have a very small circle marking the spot where they are positioned.

2. 46° 14.70'N 005° 52.25'W
3. 46° 15.47'N 005° 52.08'W
4. 46° 16.08'N 005° 49.51'W
5. 46° 15.11'N 005° 48.83'W

Go back to the points you marked on the chart for questions 2 to 5 and measure the bearings and distances between the following points. Make sure that you are measuring in the correct direction!

7. 2 to 3.
8. 3 to 4.
9. 4 to 5.
10. 5 to 2.

On Chart 3, what are the meanings of the symbol at the following positions? Some of them are on the land!

11.	026°T	3.73M from Christopher Point Light House.
12.	155°T	3.06M from Christopher Point Light House.
13.	207°T	5.49M from Christopher Point Light House.
14.	308°T	7.26M from Christopher Point Light House.

What is the latitude and longitude of the following points? The bearings and distances given are towards the dot at the centre of the compass rose (45° 53.9'N 005° 55.3'W).

15.	181°T	6.13M	What is the symbol?
16.	110°T	5.17M	What is the symbol?

Variation and deviation

1. What is the variation in the south-west part of chart 3?

Convert these true bearings to magnetic bearings.

2. 060°T Variation 10°W.
3. 040°T Variation 10°E.
4. 345°T Variation 8°E.
5. 352°T Variation 12°W.
6. 003 °T Variation 6°E.

Convert these magnetic bearings to true bearings.

7. 009°M Variation 19°E.
8. 000°M Variation 5°W.
9. 000°M Variation 10°E.
10. 345°M Variation 25°E.
11. 009°M Variation 11°W.

Convert these magnetic bearings to compass bearings. Use the deviation table in the Training Almanac.

12. 090°M What is the deviation and compass bearing?
13. 270°M What is the deviation and compass bearing?

Convert these compass bearings to magnetic bearings.

14. 315°C What is the deviation and magnetic bearing?
15. 025°C What is the deviation and magnetic bearing?

16. On Chart 4. If a vessel sees the leading beacons for Endal marina (46° 13.83'N 005° 46.78'W) in transit, dead ahead when there is no tide. What is the deviation on this heading if the compass reads 150°C?

Position lines and fixes

Chart 3. Variation = 7°W. Plot the following fixes. Give your answer as a latitude and longitude.

1.

Radio Mast (46° 19.53'N 006° 12.87'W)	039°M
End of Cape Woodward (46° 08.73'N 006° 03.48'W)	121°M
St Anthony Head Lt Ho (46° 13.88'N 006° 10.11'W)	091°M

2.

Back Shoal beacon (46° 21.38'N 005° 51.18'W)	157°M
Hill Shoal Beacon (46° 20.45'N 005° 55.06'W)	210°M
Flagstaff (46° 24.42'N 005° 57.08'W)	289°M

3.

Radio Mast (45° 44.75'N 005° 45.11'W)	211°M
Beauty Point Lt (45° 47.04' 005° 46.61'W)	270°M
Pentire Island Lt (45° 44.96'N 005° 40.73'W)	147°M

4.

Church Spire (46° 25.79'N 005° 58.45'W)	320°M
East side of Kay Island (46° 21.86'N 005°55.75'W)	202°M
Light on Southlake Pt (46° 23.58'N 005° 59.27'W)	276°M

5.

A yacht observes the two leading lights (Oc&Q) at the port Victoria (46° 26.55'N 006° 10.81'W) in transit. If the depth is 55m and the height of the tide is 5m. What is the yacht's position?

6.

What factors affect the choice of targets for a three point fix?

7.

Which source of position lines will give the most accurate result?

8.

What two pieces of information must be recorded at the time of taking the bearings for a fix?

9.

Why should you use three position lines instead of two when plotting a fix?

10.
What is your position if at MHWS the lighthouse at Cape Donne (46° 00.44'N 006° 17.77'W) appears over the horizon on a bearing of 179°M, when you estimate your height of eye as 3m?

11.
What is your position if at MLWS the lighthouse at St Anthony's Head (46° 13.884'N 006° 10.13'W) appears over the horizon on a bearing of 044°M, when you estimate your height of eye as 2m?

DRs and EPs

1. Starting at the Safe Water Buoy (45° 40.70'N 006° 13.83'W), a yacht sails for 5.0M on a heading of 304°M. What is its dead reckoning position?

2. Starting from the Safe Water Buoy (45° 40.70'N 006° 13.83'W), a vessel motors on a heading of 253°M for 8.0M. What is its DR position?

3. A vessel leaves the West Point Buoy (46° 21.42'N 006° 17.25'W) on a course of 240°M. 1 hour later the log shows that she had travelled 5.2M. If the tide was 180°T at 2.0Kn, what is the E.P?

4.

Time	Comments	Course	Log	Wind
0900	Colville E.Entrance OcR. Light to Stbd. A/C to 020°M	Pilotage	0.5	N3
1000	Estimated position	020°M	7.0	N3

A. If the tide was 106°T 3.5Kn. What is the EP at 1000?
B. What was the ground track in degrees true?
C. What was the distance made good?

5.

Time	Comments	Course	Log	Wind
1430	Bearing from LCW Buoy (46° 02.8'N 005° 57.6'W) 000°T 2.5M. A/C to 050°M	000°M	10.6	SE4
1530	Estimated position	050°M	15.8	SE4

If the tide was 319°T at 1.6Kn. What is the EP at 1530?

6.
Chart 4.
The dot at the centre of the compass rose has been plotted as a waypoint. The bearing to the waypoint is 070°T 1.3M.
A .Plot the vessel's position.
B. In the next hour the vessel sails 1.6M in 034°M, if the tide is 266°T at 0.5Kn, what is the vessel's EP?

7.
Chart 3.
Starting from a position 270°T 1.5M from Stevens Rock (46° 03.4'N 006° 18.8'W).

Time	Comments	Course	Log
1430		060°T	2.5
1448		060°T	4.5
1530	Estimated position plotted	306°T	8.7

If the tide was 012°T at 2.2Kn. What is the EP at 1530?

8.

Time	Comments	Course	Log	Wind	Leeway	Bar
0900	Stbd. hand buoy (45° 37.70'N 006° 13.04'W)	307°M	12.3	WSW5	5°	999
1000	Estimated Position	307°M	19.3	WSW5	5°	999

If the tide was 230°T 2.5Kn, plot the E.P. at 1000.

Leeway when beating

9.

Time	Comments	Course	Log	Wind	Leeway
0900	Stbd. hand buoy (45° 37.70'N 006° 13.04'W)	307°M	12.3	WSW5	5°
0930	A/C to 205°M	307°M	19.3	WSW5	5°
1000	Estimated position	205°M	16.6	WSW5	5°

What were the <u>true</u> water tracks on each leg?

Predicted EPs

10.
Chart 3. Variation = 7°W

If at 07.00 the bearing and distance to a waypoint at the centre of the compass rose to the west of Slade Island is 190°T 4.1M. Plot the vessel's position.

From this position plot the following predicted EP at 08.00.

The course is 070°M and speed is 5.8Kn.

Tide is 292°T at 2.5Kn.

A) What is the latitude and longitude of the point where the vessel reached the traffic separation scheme?
B) How far will the vessel have travelled by the log when it reaches the TSS?

Tidal streams

1. Is May 28 a spring or a neap tide?

On chart 3, at diamond B, what is the tidal stream at the following times?

2. At HW on a spring tide?
3. 3 hours before HW on a neap tide?

Using chart 3, what is the tidal stream at the following times?

4. Woodward at 0337 summer time on July 14th?

5. South of Slade Island at 2028 UT on January 23rd?

Using chart 3, what is the tidal stream at the following times?

6. East of South Douglas Island on 26th April, between 0044 and 0144 summer time?

7. Just north of Cape Donne, on 7th April, between 0323 and 0423 summer time?

8. Between which times would you experience a favourable tide on May 27th, on a passage from Victoria to Dunbarton (46°11.0'N 6° 00.0'W)?

9. How many miles would the tide carry you in the previous question? Assume a boat speed of 3kn.

10. Chart 3. What will be the direction and rate of the tide at Diamond A, at HW+5 hours, if the range of the tide was 3.6m?

11. What is the rate of the tide on September 11th at 0541 summer time at diamond B?

12. What is the rate of the tide on July 21st between 10.47 and 11.47 summer time at diamond H?

EPs with tides

Chart 3. Variation = 7°W
Plot the following Estimated Positions.

1. 24th May

Time	Comments	Course	Log	Wind	Leeway
1246	Quaker buoy (45°40.70'N 06°13.81'W)	256°M	14.3	SE3	0°
1346	Plot EP	256°M	19.3	SE5	0°
Diamond R.					

2. 12th December

Time	Comments	Course	Log	Wind	Leeway
1407	Starboard hand buoy (45°37.7'N 06°13.04'W)	320°M	21.5	E4	0°
1507	Plot the EP	320°M	28.8	E3	0°
Diamond R.					

3. 3rd May

Time	Comments	Course	Log	Wind	Leeway
1058	000°T 1M from Steven's Rock (46°03.4'N 06°18.8'W)	026°M	32.4	N5	0°
1158	Plot the EP	026°M	43.6	N4	0°
Diamond E.					

4. 10th August

Time	Comments	Course	Log	Wind	Leeway
1450	Fix (46°16.5'N 06°20.0'W)	100°M	20.3	SW4	5°
1550	Plot the EP	145°M	29.6	SW4	5°
Diamond E.					

5. 2nd August

Time	Comments	Course	Log	Wind	Leeway
O323	Fix (45°50.0'N 06°00.0'W)	055°M	23.4	NNE5	5°
0350	A/C to 337°M	081°M	26.4	NNE5	5°
0423	Plot the EP	337°M	29.9	NNE4	5°
Diamond L.					

6. 24th May

Time	Comments	Course	Log	Wind	Leeway
1246	Synka Buoy (46°10.56'N 05°53.35'W)	180°M	34.4	E3	0°
1316	Plot the EP	223°M	40.6	E3	0°

Diamond D.

7. 31st January

At 1629 the bearing and distance to a waypoint at the centre of the compass rose west of Slade Island is 150°T 4.2M.

If the vessel's speed is 6.3kn and course is 067°M.

A) What is the Latitude and Longitude of the point where the vessel reaches the TSS?

B) How far will the vessel travel through the water to reach the TSS?

Plot the following Estimated Position.

8. 22nd April

Time	Comments	Course	Log	Wind	Leeway
0816	Fix (46°24.63'N 06°12.12'W)	238°M	23.4	S5	5°
0842	A/C to 139°M	238°M	28.7	S5	5°
0916	Plot the EP	139°M	33.8	S4	5°

Use Diamond B.

Tidal heights

1. What is the height of the tide at Victoria on 3rd December at 1137 Standard Time?

2. What is the height of the tide at Port Fraser on 20th May at 0930 Summer Time?

3. What is the height of the tide at Namley Harbour on 6th September at 0941 Summer Time?

4. What is the height of the tide at Colville on the 7th October at 0329 in Summer Time?

5. What is the height of the tide at Port Fitzroy on the 15th June at 1246 in Summer Time?

6. When will the height of the tide fall to 3.0m at Hamilton Sound on the afternoon of 9th August?

7. When will the height of the tide rise to 2.0m at Port Fraser on the afternoon of 14th October?

8. What is the earliest, on a rising tide, that a boat with a draught of 1.3m can cross a bank with a drying height of 0.8m with a clearance of 1.0m, at Colville on the afternoon of 14th October?

9. A boat with a draught of 1.4m is in a creek in Namley Harbour which dries 0.9m above chart datum. What is the earliest on a rising tide that she can depart with a clearance of 0.5m on a rising tide the 25th May?

10. A boat with a draught of 1.5m wishes to use a channel at Port Fitzroy with a charted depth of 0.4m, on the morning of 28th December. What is the earliest on a rising tide that there will be a clearance of 1.0m?

11. A boat with a draught of 2.0m anchors. The Echo sounder shows the depth is 4.0m, and the current height of the tide is 2.6m. If low water will be 0.8m. What will be the clearance under the keel at low water?

12. A motor yacht anchors in Victoria Harbour at 1423 Summer Time on 11th August. The depth is 5.0m and the draught is 1.0m.

A) What is the clearance under the keel at 1423 Summer Time?
B) What is the height of tide at 1423 Summer Time?
C) How much will the tide fall between 1423 and LW?
D) What will be the clearance under the keel at LW?

13. On 13th August, if a boat which draws 1.3m anchors at Port Fraser at the time of HW(1553 Summer Time). What will be the clearance under the keel at LW if the depth when she anchors is 5.5m?

14. A yacht anchors in Namley Harbour at 1310 Summer Time on 3rd November.

A) What is the height of the tide when she anchors?
B) How much will the tide fall between 1310 and LW?
C) If the boat draws 1.6m. What is the minimum depth in which to anchor at 1310, if the skipper requires a clearance of 1.0m under the keel at LW?

15. What are the times in Summer Time and heights of HW and LW at Itchenham (page 52) on 10th June?

16. What are the times in Summer Time, and heights of HW and LW at Walton Bay (page 62) on 17th August?

Using the information from the previous 2 questions, work out the following.

17. What is the height of the tide at 1502 Summer time at Itchenham on 10th June?

18. When will the tide rise to 3.2m at Walton Bay on the afternoon of August 17th?

You will need to work the next question out from the beginning.

19. If a boat with a draught of 1.5m anchors outside Endal Marina(page 64) at 1422 Summer Time on 21st September.
A) What will be the height of the tide at 1422?
B) What will be the fall of the tide between 1422 and LW?
C) What will be the minimum depth in which to anchor at 1422 if a clearance of 1.5m is required at LW?

20. What are the times in Summer Time and heights of HW and LW at Port Rampton (page 60) on September 26th?

21. What is the height of the tide at 1837UT at Dunbarton (page 40) on 28th January?

22. What is the height of the tide at 0828 Summer Time at Suzy Bay Marina (page 44) on 3rd June?

Air Draught
On page 12 of the Training Almanac there is a table of tidal levels at the standard ports and also for secondary ports. This table includes the data from the tidal levels table on the chart but also for many other places on the charts.

23.
Use this table to answer the next question.

Chart 4C. What is the clearance under the bridge at leading to Blackmill Marina at MHWN? (Use Blackmill)

Working out the course to steer

Chart 3. Variation 7°W.

1. The position of the yacht by GPS is 45°42.8'N 06°18.37'W What is the course to steer to reach the Quaker Safe Water buoy (45°40.7'N 06°13.81'W), if the boat's speed is 3.9Kn and the tide is 180°T at 1.5Kn?

2. Starting from 45°54.0'N06°00.0'W, what is the course to steer to reach the leading line at 45°51.8'N 05°49.1'W, if the boat's speed is 8.1Kn and the tide is 350°T at 1.9Kn?

3. In the previous two questions, calculate how long the passage will take.

4. The bearing and distance to the waypoint at the centre of the compass rose west of Slade Island is 170°T 12.4M.
   A) From this position what is the course to steer to reach the Synka Buoy (46°10.57'N 05°53.37'W) if the vessel's speed is 3.6kn and the tide is 016°T at 2.0kn?

   B) What is the vessel's speed over the ground (SOG)?

   C) How long will the passage take?

5. On 4th October, at 2213 Summer Time and starting from 45°43.0'N 05°40.0'W.
   A) What is the course to steer to reach the Safe Water Buoy (45°40.8'N 05°48.4'W), if the boat's speed is expected to be 6.9Kn?

   B) What will be the ETA? Diamond Q.

6. On 24th May a vessel is in position 45°57.7'N 05°40.00'W at 1346 Summer Time making 9.0kn. Diamond K.

   A) What is the course to steer for a point 1.2M north of the Christopher Point Light House?

   B) What will be the ETA?

7. On 25th April, at 2244 Summer Time a vessel is in position 45°43.0'N 06°20.0'W. Use Diamond M.

A) What is the course to steer to 45°52.0'N 06°20.0'W if the predicted boat speed is 4.5Kn?

B) What is the ETA?

Chart 4F. Variation = 7°W

8. On March 22nd, in thick fog, a vessel is in position 46°17.2'N 05°57.30'W at 1326UT. Diamond C.

A) What is the course to steer to reach the N Potta Buoy (46°16.2'N 05°59.03'W) if the boat speed is 4.6Kn and the leeway in a northerly wind of 10°?

B) What is the ETA?

Finding the compass course to steer. Chart 4F.

9. On the 7th October at 1020 Summer Time, a vessel starts a passage from the Range Head buoy (46°15.47'N 05°52.8'W) to the NE Groats Buoy (46°14.4'N 05°51.5'W). If the vessel's speed is 3.2kn and the leeway from a westerly wind is 10°;

A) What is the compass course to steer?

B) What is the ETA?

Use Diamond E.

Finding the compass course to steer. Chart 3.

10. On the 19th May at 1505 Summer Time a vessel is in position 46°00.0'N 005°50.0'W. If its speed is 15Kn and the expected leeway in a southerly wind is 5°

A) What is the compass course to reach 45°59.0'N 006°00.00'W?

B) What is the ETA?

Answers to Charts

1. 46° 21.03' N 005° 44.21' W
   46° 07.21' N 006° 15.02' W

2. Tidal diamond “E”.
3. South Cardinal buoy, “Range Head” VQ(6)+LFl 10s.
4. Major light, Fl(3)10s 50m 10M.
5. Wreck swept by wire drag, clear to 14.5m below chart datum.

7. 009°T 0.8M.
8. 071°T 1.9M
9. 154°T 1.08M
10. 260°T 2.42M

11. International Maritime Boundary.
12. Spot height 230m above MHWS, Mount Slade.
13. 20m contour line, depth below chart datum.
14. Quality of the bottom, Sand and Shell.

Notes:

The quality of the bottom is important for anchoring, some materials such as rock or weed make anchoring very difficult, and you may prefer to find somewhere with a sand, or mud bottom. Also in the past, you could put something sticky on the lead line and bring up a sample; this may have helped you decide your position!

15. 45° 59.96’N 005° 54.34'W Tidal diamond “J”.
16. 45° 55.72'N 006° 02.37'W Light obscured sector.

Answers to Variation and deviation

1. 2005 - 2006 = 1 year 1 X 8'E = 0° 8'E

   7° 15'W
   -0° 08'E
   7° 07'W in 2006 (rounded down to 7°W).

2. 070°M.
3. 030°M.
4. 337°M.
5. 004°M.
6. 357°M.

7. 028°T.
8. 355°T.
9. 010°T.
10. 010°T.
11. 358°T.

12. 090°M
    4°E deviation.
    086°C

13. 270°M
    4°W deviation.
    274°C

14. 315°C
    6°W deviation.
    309°M

15. 025°C
    2°W deviation.
    023°M

16.

Transit	148°T
Variation	7°W
Magnetic	155°M

Compass	150°C
Deviation	5°E on a course of 150°C.

Answers to fixing

1. 46° 13.27'N 006° 18.43'W

2. 46° 23.83'N 005° 53.03'W

3. 45° 47.29'N 005° 43.51'W

4. 46° 23.64'N 005° 55.09'W

5. 46° 24.15'N 006° 15.18'W

6. On the chart.
   Identifiable.
   Good angle of cut between the bearings.
   Not too far away.

7. Transits.

8. The time.
   The log reading.

9. If there is an error in one of the bearings you will get a large cocked hat.

10. Height of light above MHWS is 68m
    Height of eye is 3m
    Approximate range of the light is 20.8M

    Bearing 179°M Variation = 7°W True bearing = 172°T

    Plot bearing and distance.

    Fix = 46° 20.9'N 006° 21.6'W.

11. Height of light above MHWS is 33m

    MHWS = 5.6m
    MLWS = 0.7m
    Extra = 4.9m

    Height of light above sea level = 37.9m

Height of eye is 2m
Approximate range of the light is 15.7

Bearing 044°M Variation = 7°W True bearing = 037°T

Plot bearing and distance.

Fix = 46° 01.38'N 006° 23.60'W.

DRs and EPs

1. DR = 45° 42.95'N 006° 20.14'W

2. DR = 45° 37.47'N 006° 24.19'W

3. EP = 46° 16.33'N 006° 23.23'W

4. A EP = 46° 03.67' 006° 02.43'W
   B 042°T
   C 7.17M

5. EP = 46° 10.21'N 005° 53.97'W
   Course steered 050°M
   Distance travelled 5.2M.

6. 46° 15.75'N 005° 54.34'W

7. 46° 09.0'N 006° 22.6 'W

8. 45° 40.06'N 006° 23.87'W

9.
1st Course steered 307°M + 5°leeway -7° variation = 305°T
2nd Course steered 205ºM - 5°leeway - 7° variation = 193°T

10.
   A 46° 00.57'N 005° 51.17'W. Where vessel reaches TSS.
   B 4.35M. Distance travelled by the log.

Tidal streams

1. Range = 4.9m, therefore a spring tide.

2. Diamond B tidal stream at HW = 186°T 1.2kn.

3. Diamond B tidal stream at HW-3 = 154°T 2.0kn.

4. July 14
   Victoria Summer Time
   HW 0137 5.6
   LW 0756 0.7
   Range is 4.9m therefore a spring tide.
   0337 is HW+2 hours.

   Diamond F = 282°T 1.7Kn.

5. January 23
   Victoria Standard Time
   HW 1728 4.5
   LW 2349 2.0
   Range is 2.5m therefore a neap tide.
   2028 is HW+3 hours.

   Diamond N = 309°T 1.4Kn.

6. April 26
   Victoria summer time
   HW 2214 5.5 25 April
   LW 0414 0.6 26 April
   Range is 4.9m therefore a spring tide.
   2144
   HW
   2244
   HW+1
   2344
   HW+2
   0044
   HW+3 Diamond C = 185°T 1.9kn.
   0144

7. April 7th
Victoria summer time
LW 0137 2.3
HW 0753 4.5
Range is 2.2m therefore a neap tide.
0323
HW-4 Diamond H = 180°T 0.5kn.
0423
HW-3
0523
HW-2
0623
HW-1
0723
HW
0823

8. HW Victoria = 1138 summer time
Between 0518 Summer Time and 1308 Summer Time.
This sort of question is open to some interpretation, if you were short of time to make the passage you would leave as early as possible.

9. 1st hour 1.0M
2nd hour 1.7M
3rd hour 2.8M
4th hour 3.4M
5th hour 3.3M
6th hour 2.7M
7th hour 2.2M
8th hour 1.9M
Total 19.0M approximately.

10.
HW+5 Diamond A = 112°T 2.0Kn or 1.0Kn.
The tide stream for a range of tide of 3.6m = 112°T 1.5kn.

11.
Victoria summer time
HW 0141 6.0
LW 0756 0.5
Range = 5.5m, greater than average spring tide.
0541 = HW+4 hours
Diamond B = 342°T 3.9kn or 2.0kn.
Extrapolate for range = 4.4kn.

12.
Victoria summer time
HW 0847 4.9
LW 1500 1.4
Range = 3.5m, midway range.

1047 - 1147 = HW+2 and HW+3 hours for ½ hours each
HW+2 = 352°T 0.8kn or 0.5kn. Int 0.6kn. 0.3M
HW+3 = 293°T 2.0kn or 1.1kn. Int 1.5kn. 0.75M

EPs with tides

1.
24 May
Victoria Summer Time
HW 0916 5.5
LW 1534 0.6
Range = 4.9m, therefore a spring tide.

EP = 45°40.85'N 06°20.94'W

0846
HW
0946
HW+1
1046
HW+2
1146
HW+3
1246
HW+4 Diamond R 349°T 2.0kn.
1346

2.
12 December
Victoria UT
LW 1025 2.4
HW 1637 4.7
Range = 2.3m, therefore a neap tide.

EP = 45°41.20'N 06° 20.62'W.

1407
HW-2 Diamond R 179°T 1.4kn.
1507
HW-1
1607
HW
1707

3.
3 May
Victoria Summer Time
HW 1609 4.4
LW 2211 2.1
Range = 2.3, therefore a neap tide.

EP = 45°16.45'N 06°15.56'W.

1539
HW
1639
HW+1
1739
HW+2
1839
HW+3
1939
HW+4 Diamond E 306°T 1.8kn.
2039

4.
10 August
Victoria Summer Time
HW 1220 5.6
LW 1820 0.6
Range = 5.0m, therefore a spring tide.

Course = 145°M
Leeway = - 5°
Variation = - 7°W
Course = 133°T

EP = 46° 11.9'N 06° 13.64W.

	1150
HW	
	1250
HW+1	
	1350
HW+2	
	1450
HW+3	Diamond E 307°T 2.8kn
	1550

5.
2 August
Victoria Summer Time
LW 2239 2.1
HW 0453 4.5
Range = 2.4m, therefore a neap tide.

Course = 081°M
Leeway = + 5°
Variation = - 7°W
Course = 079°T

Course = 337°M
Leeway = - 5°
Variation = - 7°W
Course = 325°T

EP = 45°53.86N 05°59.16'W.

	0323
HW-1	Diamond L 325°T 0.6kn
	0423
HW	
	0523

6.

24 May

Victoria Summer Time

HW 0916 5.5

LW 1534 0.6

Range = 4.9m, therefore a spring tide.

EP = 46°08.16'N 05° 51.00'W

0846
HW
0946
HW+1
1046
HW+2
1146
HW+3
1246
HW+4 Diamond D 210° 1.9kn
1346 0.8M in half hour.

7.

31 January

Victoria UT

HW 1159 6.0

LW 1816 0.3

Range = 5.7m, therefore a greater than spring tide.

A) Vessel reaches the TSS at 46°00.96'N 05° 56.60'W

B) Vessel travels 4.3M by the log.

1129
HW
1229
HW+1
1329
HW+2
1429
HW+3
1529
HW+4
1629
HW+5 Diamond D 296°3.6kn
1729 Extrapolate = 4.2kn.

8.

22 April

Victoria Summer Time

HW 0546 4.5

LW 1312 1.6

Range = 2.9m therefore Not spring or neap.

EP = 46°20.60'N 06° 17.70'W

0516
HW
0616
HW+1
0716
HW+2
0816
HW+3 Diamond B 338°3.7kn/1.8kn
0916

Interpolate = 2.2kn.

Answers to tidal heights

1. 3 December
   Victoria Standard time
   HW 0907 5.7
   LW 1510 0.8
   Range = 4.9m therefore a spring tide.

   1137 is HW + 2 hours 30 minutes.
   Height of tide at 1137 is = 3.8m.

2. 20 May
   Port Fraser Summer time
   HW 0620 3.5
   LW 1223 1.2
   Range = 2.3m therefore a neap tide.

   0930 is HW + 3 hours 10 minutes.
   Height of tide at 0930 is = 2.3m.

3. 6 September
   Namley Harbour Summer time
   LW 0529 0.8
   HW 1201 3.8
   Range = 3.0m therefore a midway tide.

   0941 is HW - 2 hours 20 minutes.
   Height of tide at 0941 is = 2.75m.

4. 7 October
   Colville Summer Time
   HW 0109 5.0
   LW 0708 0.7
   Range = 4.3m therefore a spring tide.

   0329 is HW + 2 hours 20 minutes.
   The height of the tide at 0329 is = 3.3m.

5. 15 June
Port Fitzroy Summer Time
LW 1045 1.0
HW 1701 6.0
Range = 5.0m therefore midway tide.

1246 is HW - 4 hours 15 minutes.
The height of the tide at 1246 is = 2.2m.

6. 9 August
Hamilton Sound Summer Time
HW 1357 5.8
LW 2016 0.5
Range = 5.3m therefore a spring tide.

The tide will fall to 3.0m at HW+ 2 hours 50 minutes 1647 Summer Time.

7. 14 October
Port Fraser Summer Time
LW 1240 1.1
HW 1904 3.4
Range = 2.3m therefore a neap tide.

The tide will fall to 2.0m at HW- 3 hours 25 minutes 1539 Summer Time.

8. 14 October
Colville Summer Time
LW 1258 1.4
HW 1917 3.9
Range = 2.5 m therefore a neap tide.

1.3m + 1.0m + 0.8m = 3.1m
The tide will rise to 3.1m at HW- 2 hours 15 minutes 1702 Summer Time.

9. 25 May
Namley Harbour Summer time
LW 0509 0.2
HW 1139 4.0
Range = 3.8m therefore a spring tide.

1.4 + 0.9 + 0.5 = 2.8m.
The tide will rise to 2.8m at HW- 2 hours 0939 Summer time.

10. 28 December
Port Fitzroy Standard time
LW 0027 1.4
HW 0657 5.5
Range = 4.1m therefore a neap tide.

Draught	1.5
Clearance	+1.0
Charted depth	-0.4
Total	2.1m

The tide will rise to 2.1m at HW- 4 hours 35 minutes 0222 Standard time.

11.

Current height of the tide	2.6m
Low water	0.8m
Fall of tide	1.8m

Current depth	4.0m
Draught	2.0m
Current clearance	2.0m
Fall of tide	1.8m
Clearance at low water	0.2m

12. A) Clearance at 1423 UT = 4.0m
B) 11 August
Victoria Summer time
HW 1303 5.6
LW 1903 0.6
Range = 5.0m therefore a spring tide.
Height of tide at 1423 = 4.9m.

C)

Height of the tide at 1423	= 5.0m
LW	= 0.6m
Fall of tide	= 4.4m

D)

Clearance at 1423 =	4.0m
Fall of tide	= 4.4m
Clearance at LW	= -0.4m!

13.

HW	4.2m
LW	0.3m
Fall	3.9m

Depth at HW	5.5m
Draught	1.3m
Clearance at HW	4.2m
Fall of tide	3.9m
Clearance at LW	0.3m

14. 3 November
Namley Harbour UT
HW 1000 3.9
LW 1606 0.3
Range 3.6m therefore a spring tide.

A) Height of tide at 1310 = 1.75m

B)

Tide at 1310	1.75m
LW	0.30m
Fall of tide	1.45m

C)

Fall of tide	1.45m
Draught	1.60m
Clearance	1.00m
Depth in which to anchor at 1310	4.05m

15. 10 June

Namley UT		Standard	Itchenham	Summer
LW 0443 0.6	+0000	-0.1	0443 0.5	0543
HW 1122 3.8	+0020	-0.2	1142 3.6	1242
LW 1704 0.6	+0000	-0.1	1704 0.5	1804
HW 2336 3.7	+0020	-0.2	2356 3.5	0056

Range = 3.2m therefore nearly a spring tide.

16. 17 August

Port Fraser UT		Standard	Walton Bay	Summer
HW 0614 3.5	-0020	+0.1	0554 3.6	0653
LW 1217 1.2	-0024	+0.8	1153 2.0	1253
HW 1842 3.6	-0020	+0.1	1822 3.7	1922

Range = 2.3m therefore a neap tide.

17. 1502 = HW +2 hours 20 minutes.
Height of tide at 1502 = 2.3m.

18. Tide will rise to 3.2m at HW - 2 hours 10 minutes = 1712 Summer Time.

19. 21 September

Port Fraser UT		Endal Marina UT	Summer
HW 1144 4.1	-0042 +0.4	1102 4.5	1202
LW 1757 0.5	-0035 0.0	1722 0.5	1822

Range = 3.6m therefore a spring tide.

A) Height of tide at 1422 = 2.8m

B)

Height of tide at 0853	=	2.8m
LW	=	0.5m
Fall of tide	=	2.3m

C)

Fall of tide	=	2.3m
Draught	=	1.5m
Clearance	=	1.5m
Minimum depth to anchor		5.3m

20. 26 September

Namley UT		Port Rampton UT	Summer
HW 0159 3.7	-0029 +0.3	0130 4.0	0230
LW 0742 0.7	-0008 +0.5	0734 1.2	0834
HW 1409 3.8	-0028 +0.4	1441 4.2	1541
LW 1958 0.7	-0008 +0.5	1950 1.2	2050

21. 28 January
Dunbarton UT
LW 1617 0.8
HW 2300 4.2

Range = 3.4m therefore a spring tide.

Height of tide at 1837UT = 1.9m.

22. 3 June

Dunbarton UT		Suzy Bay Marina UT	Summer
HW 0436 3.4 +0003	-0.1	0439 3.3	0539
LW 1003 1.7 +0005	-0.2	1008 1.5	1108

Range = 1.7m therefore a spring tide.

Height of tide at 0828 Summer time = 2.7m.

23.

HAT Blackmill 6.8m

- MHWN Blackmill 5.2m

Height of tide below HAT 1.6m

+ Clearance under bridge 15.0m

Clearance 16.6m

Answers to course to steer

1.
Course to steer 112°M.

2.
Course to steer 125°M.

3.
(1) Distance = 3.85M
Speed = 4.55kn
T=D/S = 0.85 hours
X60 = 51 minutes.

(2) Distance = 7.9M
Speed = 7.1kn
T=D/S = 1.11 hours
X60 = 1 hour 7 minutes.

4.
A) Course to steer = 055°M

B) Speed = 5.38kn

C)
Distance = 5.72M
Speed = 5.38kn
T=D/S = 1.06 hours
X60 = 1 hour 4 minutes

5.
4th October
Victoria Summer Time
HW 2143 5.6
LW 0359 0.7
Range = 4.9m, therefore a spring tide.

	2113
HW	
	2213
HW+1	Diamond Q = 169°T 2.0kn.
	2313

Course to steer = 273°M

Distance = 6.29M
Speed = 6.92kn

T=D/S = 0.91 hours
= 54 minutes = 2307 Summer Time.

6.
24 May
Victoria Summer Time
HW 0916 5.5
LW 1534 0.6
Range 4.9m,
therefore a spring tide.

Predict half hour for passage.

A) Course to steer = 234°M

Distance made good = 5.21M
Ground speed = 10.42kn.

Distance = 5.5M
Speed = 10.42kn
T=D/S = 0.52 hours
= 32 minutes
B) ETA = 1418 Summer Time.

	0846
HW	
	0946
HW+1	
	1046
HW+2	
	1146
HW+3	
	1246
HW+4	
	1346
HW+5	Diamond K = 298°T 3.3kn/1.65M
	1436

7.
25th April
Victoria Summer Time
HW 2214 5.5
LW 0414 0.6
Range = 4.9m, therefore a spring tide.

Predict 2 hours for passage.

A) Course to steer = 010°M

B) Distance = 9.05M
Speed = 4.25kn
T=D/S = 2.13 hours
= 2 hours 8 minutes
B) ETA = 0054 Summer Time.
.

	2144
HW	
	2244
HW+1	Diamond M = 186°T 1.2kn.
	2344
HW+2	Diamond M = 331°T 0.8kn.
	0044

8.
22 March
Victoria UT
LW 0936 2.0
HW 1556 4.4
Range = 2.4m therefore a neap tide.

Water track	= 212°T
Leeway	= +10°
Course to steer	= 222°T
Variation	= +7°W
Course to steer	= 229°M

Distance	= 1.7M
Speed	= 4.0kn
T=D/S	= 0.42 hours
	= 25 minutes = 1351 UT.

1326
HW-2 Diamond C = 332°T 1.7kn.
1426
HW-1
1526
HW
1626

9.
7 October
Victoria Summer Time
LW 0521 0.1
HW 1133 6.0
Range = 5.9m therefore greater than spring tide.

1003
HW-1 Diamond E = 068°T 1.7kn/0.9Kn
1103
HW
1203

Tide rate 1.7Kn/0.9Kn with range of 5.9m therefore rate = 2.1Kn.

Plot diagram for ½ hour.

A)

Water track	= 205°T
Leeway	+10°
	+ 215°T
Variation	+7°W
	222°M
Deviation	-1°C

Compass course to steer = 221°C

B)

Distance	= 1.5M
SOG	= 2.2Kn
T=D/S	= 0.68 hours
X60	= 41 minutes.
ETA	= 1101 Summer Time.

10.
19 May
Victoria Summer Time
LW 1014 1.5
HW 1635 4.5
Range = 3.0m therefore mid tide.

	1505
HW-1	Diamond J = 117°T 3.1kn/1.6Kn
	1605
HW	
	1705

Tide rate 3.1Kn/1.7Kn with range of 3.0m therefore rate = 2.0Kn.
1.0M in half hour.

A)

Water track	= 266°T
Leeway	-5°
	+ 261°T
Variation	+7°W
	268°M
Deviation	+4°C

Compass course to steer = 272°C

B)

Distance	= 7.1M
SOG	= 13.4Kn
T=D/S	= 0.53 hours
X60	= 32 minutes.
ETA	= 1437 Summer Time.