

PORT SARCC NAV EX 2 – INTRODUCTION TO PLOTTING

Exercises courtesy of Geoff Shelton

POSITION - DISTANCE - DIRECTION

1. Identify the following places.
 - (a) $31^{\circ} 46'.2S$ $152^{\circ} 48'.5E$
 - (b) $30^{\circ} 56'.4S$ $153^{\circ} 06'.1E$
 - (c) $31^{\circ} 50'.7S$ $152^{\circ} 45'.3E$
 - (d) $31^{\circ} 43'.6S$ $152^{\circ} 48'.2E$

2. Find the geographical position of the following.
 - (a) Tacking Point Lt.
 - (b) Mt. Cairncross (533)
 - (c) Smokey Cape Lt.
 - (d) Crescent Hd. (63)
 - (e) Crowdy Hd. Lt.
 - (f) The centre of the southern compass rose

3. Find the **distances** and **directions** between the following positions

FROM

TO

- | | |
|--|--|
| (a) Jolly Nose (246) | Middle Brother () |
| (b) Croppys Hill () | Cliff Pk. (99) |
| (c) Big Smokey (308) | Ballengara () |
| (d) $31^{\circ} 05'.2S$ $153^{\circ} 10'.1E$ | $31^{\circ} 30'.1S$ $153^{\circ} 31'.2E$ |
| (e) $31^{\circ} 36'.0S$ $153^{\circ} 04'.4E$ | $31^{\circ} 17'.6S$ $153^{\circ} 08'.2E$ |

4. You are in position $31^{\circ} 30'.0S$ $153^{\circ} 00'.0E$

What is the true bearing of:

- (a) Tacking Pt. Lt.
- (b) Tank (191) on Grants Hd.
- (c) Diamond Hd (112)
- (d) Smoky Cape Lt.

TIME - SPEED - DISTANCE

5. A vessel is broken down and gives their position as due east of Nobbies Headland in 73 metres.

- (a) What is the Lat/Long position
- (b) How far is the vessel from the entrance to the Hastings River
- (c) How long would it take CR1 to reach the vessel at 20 Knots

6. A vessel gives it position as Tacking Point Lighthouse is in transit with North Brother Mountain and Queens Head in transit with the Elephants back

- (a) What is the Lat/Long position
- (b) What is the depth of water
- (c) How far is the vessel from the entrance to the Hastings River
- (d) What course will CR1 steer to reach the vessel
- (e) How long would it take Rescue One to reach the vessel at 20 Knots

7. A vessel gives its position as Tacking Point bearing 270° and Camden Head bearing 210°
- (a) What is the Lat/Long position
 - (b) How far is the vessel from Port Macquarie
8. A vessel gives its position as Point Plomber bearing 280° , Camden Head bearing 220° and Tacking Point bearing 240°
- (a) What is the Lat/Long position
 - (b) What is the bearing of the vessel from Port Macquarie
 - (c) How far is the vessel from Port Macquarie
9. A disabled yacht gives its position as $31^{\circ} 20'.348$ south, $153^{\circ} 08'.598$ east.
- (a) How far is the vessel from Port Macquarie
 - (b) What depth of water is the vessel in
 - (c) What course should CR1 steer to reach the vessel
10. CR1 has picked up an injured person from a yacht at $31^{\circ} 35' S 153^{\circ} 01' E$. They have called for an Ambulance to meet them at the Country Comfort Wharf. Best speed under the conditions is 15 knots.
- (a) What is the ETA of CR1 if the time now is 0925
 - (b) How long would it take to tow a vessel from the above position at a speed of 7 knots
11. How far will the RIB travel at:
- (a) 23 knots for 5 minutes
 - (b) 30 knots for 20 minutes

ANSWERS COASTAL NAVIGATION EXERCISES

EXERCISE NO.1

1. (a) Mermaid Reef
 (b) Fish Rock
 (c) Crowdy Head Lt.
 (d) Diamond Hd.

2. (a) 31° 28'.6S 152° 56'.2E
 (b) 31° 20'.6S 152° 41'.0E
 (c) 30° 55'.5S 153° 05'.2E
 (d) 31° 11'.6S 152° 58'.9E
 (e) 31° 50'.7S 152° 45'.3E
 (f) 31° 30'.0S 153° 15'.0E

3. (a) 9.6M 220° T
 (b) 13.8M 039° T
 (c) 24.3M 231° T
 (d) 30.7M 144° T
 (e) 18.7M 010° T

4. (a) 293° T
 (b) 233° T
 (c) 217° T
 (d) 008° T