

**CHECK YOUR PROGRESS: NAME:**  
**NAVIGATION 2 AUS 811** [Check your answers](#)

Use [chartlet a](#) & [chartlet b](#) provided.

A [deviation card](#) supplied at the end of this file.

**Question 1**

- a What is the distance, in nautical miles, between Mermaid reef and Perpendicular point?

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- b What is the charted depth nearest the position  $31^{\circ} 48'.5S$ ,  $152^{\circ} 45' E$ ?

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- c Describe the lighting characteristics of Tacking Point Lt.

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- d What is the latitude and longitude of the highest point of Transit Hill ?

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**Question 2**

- a What is the latitude and longitude of the entrance to the Hastings River?

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- b A vessel at a speed of 12 knots will travel how far in 2 hours and 45 minutes?

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- c East of Diamond Head there is a chart symbol, CoS What does it mean?

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- d How many nautical miles is equal to one minute of Latitude?

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### Question 3

Complete the following compass error table.

True Course	Variation	Magnetic Course	Deviation	Compass Course	Compass Error
020 <sup>0</sup>			7 <sup>0</sup> W	007 <sup>0</sup>	
	16 <sup>0</sup> E		3 <sup>0</sup> W	316 <sup>0</sup>	
	9 <sup>0</sup> W	133 <sup>0</sup>		134 <sup>0</sup>	
	12 <sup>0</sup> E	235 <sup>0</sup>	8 <sup>0</sup> E		

True Course	Variation	Magnetic Course	Deviation	Compass Course	Compass Error
295 <sup>0</sup>			3 <sup>0</sup> E	280 <sup>0</sup>	
	16 <sup>0</sup> E		6 <sup>0</sup> E	180 <sup>0</sup>	
	9 <sup>0</sup> W	317 <sup>0</sup>		320 <sup>0</sup>	
	10 <sup>0</sup> E	208 <sup>0</sup>	8 <sup>0</sup> E		

### Question 4

At 1400 Crowdy Head Light bore 215.5<sup>0</sup> M. At the same time Grants Head bore 257.5<sup>0</sup> M. What is the Latitude and Longitude of the vessel?

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### Question 5

At 8.0 knots, how far will a vessel travel in 2 hours 15 minutes?

- a. 11.0 n miles
- b. 19.0 n miles
- c. 18.0 n miles
- d. 22.0 n miles

### Question 6

Courses and bearings are plotted on charts as:

- a. magnetic.
- b. all of the choices.
- c. compass.
- d. true.

### Question 7

The variation for your area of your passage can be found:

- a. from the radar.
- b. from the deviation card.
- c. from the tide tables.
- d. from the chart's compass rose.

### Question 8

Deviation of the compass is caused by:

- a. Magnetic influences in the vessel.
- b. The earth's magnetic field.
- c. Magnets in the compass.
- d. The moon's influence.

**Question 9**

Your vessel has Mt. Cairncross (533) and Queens Head (32) in transit dead ahead. Your compass heading is  $266^{\circ}$  C. You suspect your deviation card is wrong, find:

a The compass error on this heading.

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b Calculate the deviation of the compass on this heading.

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c Is the deviation different from the deviation card?

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d If yes, explain why and what action would you take.

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### Question 10

You fix your vessel's position by radar at 1230

Eastern edge of Point Plomer	range 1.3 NM
Green Islet	range 3.4 NM
Tacking Point Light	range 10.2 NM

What is the Latitude and Longitude of the 1230 position? What is the compass course to steer to a pass Tacking Point Light at a distance of 1 NM. If the vessels speed is 7 knots, at what time will Tacking Point Light and Transit Hill (118) be in transit?

**Lat & Long:** \_\_\_\_\_

**CCTS:** \_\_\_\_\_

**ETA:** \_\_\_\_\_

### Question 11

List four sources of weather information.

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

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

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

4. \_\_\_\_\_

**Question 12**

On a weather chart three and a half feathers on a wind arrow indicates a wind strength of:

- a. 12.5 knots
- b. 35 knots
- c. 25 knots
- d. 15 knots

**Question 13**

A barometer or barograph assists weather forecasting by indicating:

- a. the atmospheric pressure
- b. the rise and fall of atmospheric pressure
- c. the amount and rate of change in pressure
- d. all of the choices

**Question 14**

Lines on a weather map joining places of equal mean sea level pressure are called:

- a. fronts
- b. equidistants
- c. isobars
- d. ridges

**Question 15**

You should avoid "tapping the glass" of an aneroid barometer as this will damage it.

TRUE FALSE

**Question 16**

A STRONG WINDS WARNING indicates average winds above:

- a. 26 knots
- b. 25 knots
- c. 34 knots
- d. 48 knots

### Question 17

In the Southern Hemisphere wind travels clockwise around a low pressure system.

TRUE FALSE

### Question 18

Buys Ballot's law states that if an observer (in the Southern Hemisphere) stands *facing the wind* the centre of a low pressure system will lie:

- a. to the observers left
- b. to the observers right
- c. directly behind the observer
- d. four points to the observers right

### Question 19

Forecast wind and wave heights from the Bureau Of Meteorology warn that they are averages only and may in fact be:

- a. 20% lower
- b. 40% higher
- c. 20% higher
- d. 40% lower

### Question 20

A land breeze is one that blows onto the land after nightfall.

TRUE FALSE

### Question 21

What type of tides are experienced with the first quarter of the moon?

- a. Lunar tides
- b. Spring tides
- c. Neap tides
- d. Diurnal tides

**Question 22**

Heights of objects on charts are measured upwards from:

- a Chart Datum
- b Lowest Astronomical Tides
- c Mean Sea Level
- d Mean High Water Springs

**Question 23**

Find the under keel clearance of a vessel drawing 1.2 metres passing over a charted depth of 3.6 metres when the height of tide 1.4 metres over datum.

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<b>DEVIATION CARD 1 NAVIGATION</b>		
<b>Magnetic Heading</b>	<b>Deviation</b>	<b>Compass Heading</b>
353°	6°W	000°
014°	6°W	020°
035°	5°W	040°
056°	4°W	060°
078°	2°W	080°
099°	1°W	100°
120°	0°E	120°
142°	2°E	140°
164°	4°E	160°
186°	6°E	180°
208°	8°E	200°
230°	10°E	220°
247°	7°E	240°
266°	6°E	260°
283°	3°E	280°
301°	1°E	300°
317°	3°W	320°
336°	4°W	340°
355°	6°W	360°
<b>This table should not to be used for navigation.</b>		

[Check your answers](#)