 Province of the

EASTERN CAPE

EDUCATION

**DIRECTORATE SENIOR CURRICULUM MANAGEMENT (SEN-FET)**

**HOME SCHOOLING SELF-STUDY WORKSHEET HOME TEST SHEET**

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| --- | --- | --- | --- | --- | --- |
| **SUBJECT** | **NAUTICAL SCIENCE** | **GRADE** | **12** | **DATE** | **11-15/05/20** |
| **TOPIC** | **ASTRO NAVIGATION** | **TERM 1****REVISION** | **X** | **TERM 2 CONTENT** | **X** |

**Question 1.**

At 1445 D on 20 june 1981, in DR position 24° 30’ N 61° 31.1’ E, a sextant altitude of the sun’s lower limb was taken to the south of the observer. The sextant reading was 30° 45.4’.

Index error was 4.1’ off the arc

Height of eye was 9 metres

Determine:

a. The intercept and bearing of the sun; and

b. By means of a sketch show how you would plot the resultant position line.

2. At sunrise on 19 January 1981 a compass bearing of the sun was taken in Dr position

33° 15’ S 72° 40’ E. The bearing was 132½° (C). At the time the ship’s head was 315° (C) and the variation for the area was 21° W.

Determine:

a. The GMT and zone time of sunrise.

 b. The compass error and deviation for the ship’s head.

c. The ship’s true course.