

## Oceanography: Lost Currents Lab

Name: \_\_\_\_\_

*Instructions:* In this lab you will use Oceanic Drifter Buoy data to help find a group of sailors lost at sea. Luckily they have drifted to a little island and are awaiting rescue. Time is important because they are running out of water.

### Information:

Use the data table below to track the direction of two different current buoys that have been dispersed by the National Oceanic Science Center (NOSC). After reviewing the data plot the coordinates on the map provided. You will have to use clues from the stranded sailors to figure which Current will point you to the correct island.

**Step 1:** Plot the path of buoy number 14b, on the map provided on backside.

After you have plotted the buoy points connect the dots to form a Buoy Path using colored pencil.

**Step 2:** Now plot the data for buoy number 17c, on the, map provided on backside.

After you have plotted the buoy points connect the dots to form a Buoy Path using colored pencil.

**BUOY 14b:** Launched at 08:00 hours

**BUOY 17c:** Launched at 08:00 hours

Position TIME	Hours	LAT	LONG
08:00	0	-20.25	162.00
09:00	1	-20.35	163.00
10:00	2	-21.00	164.00
11:00	3	-21.85	164.10
12:00	4	-22.75	164.50
01:00	5	-23.65	165.00
02:00	6	-24.25	165.25
03:00	7	-24.50	165.90
04:00	8	-24.40	166.75
05:00	9	-24.50	167.50
06:00	10	-24.25	168.65
07:00	11	-24.25	169.00
08:00	12	-23.75	169.45
09:00	13	-22.65	169.80
10:00	14	-21.50	169.25
11:00	15	-21.00	168.75
12:00	16	-21.10	167.85
01:00	17	-21.00	166.80
02:00	18	-21.00	166.00
03:00	19	-20.70	165.50

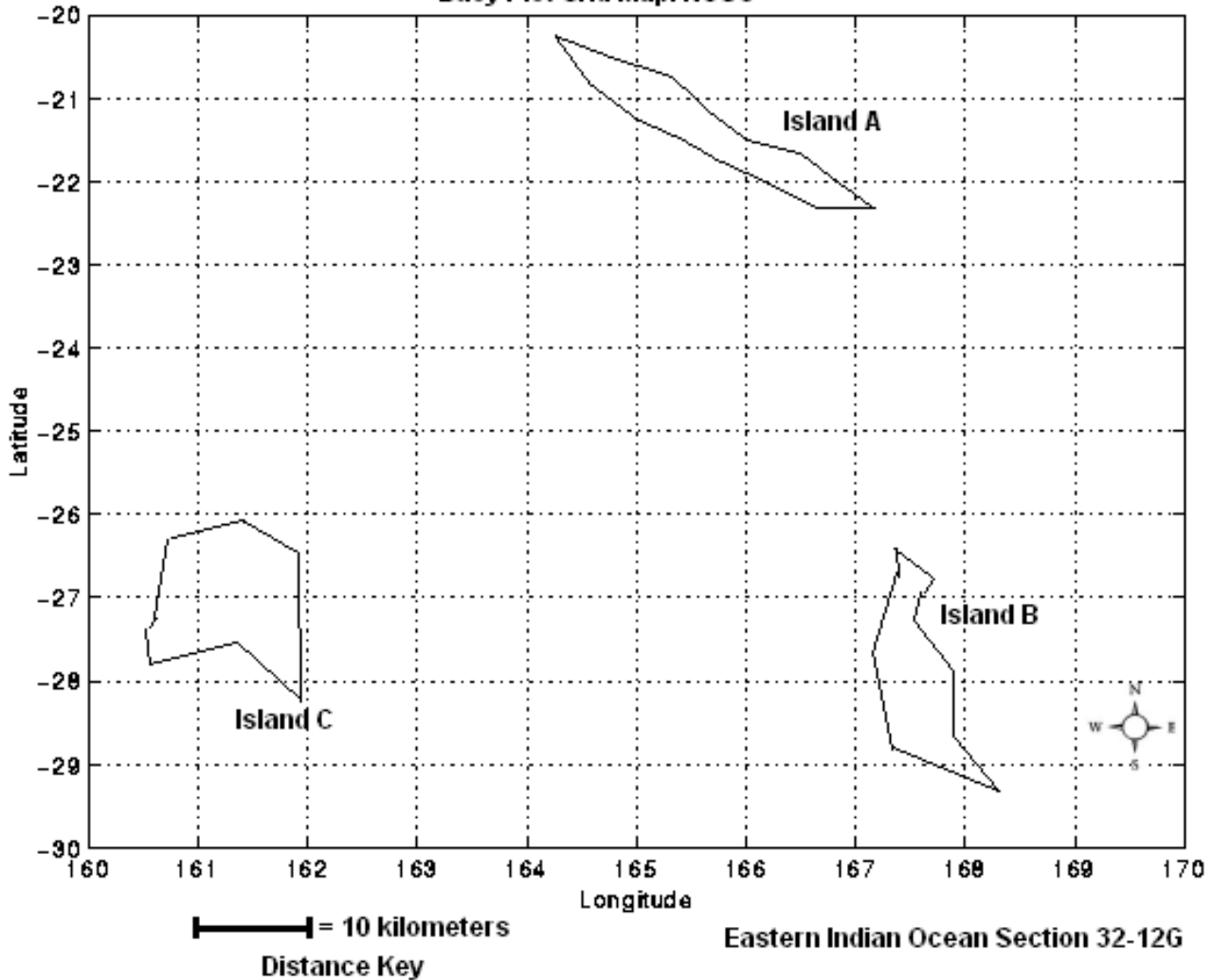
Position TIME	Hours	LAT	LONG
08:00	0	-25.40	160.00
09:00	1	-24.50	160.40
10:00	2	-23.65	160.60
11:00	3	-23.00	161.00
12:00	4	-22.25	161.50
01:00	5	-22.10	162.10
02:00	6	-22.75	163.90
03:00	7	-23.40	164.10
04:00	8	-24.30	164.50
05:00	9	-25.25	164.40
06:00	10	-26.00	164.60
07:00	11	-26.50	164.70
08:00	12	-27.00	164.70
09:00	13	-27.75	164.80
10:00	14	-28.75	165.00
11:00	15	-29.00	165.75
12:00	16	-29.00	166.50
01:00	17	-29.60	166.90
02:00	18	-29.75	167.80
03:00	19	-29.50	169.10

**Step 3:** The following information was sent to the coast guard from the sailors after their boat sank and they were still floating on a raft.

*First communication* A: Their boat sank at the coordinates: Lat -22.10 | Long. 162.25 (Mark your map with an **X**)

*Second Communication* B: 12 hours later they radioed that they could see land. (Mark your map with a **Y**)  
(Base this location on the Buoy float path and speed)

**Buoy Plot Grid Map: NOSC**



**Eastern Indian Ocean Section 32-12G**

**Step 4: (Be sure you have complete Step 3 on previous page)**

Using the information provided from the Buoys and your completed map. Answer the following questions.

1] Which Buoy current did the raft most likely follow? \_\_\_\_\_

2] What general direction does the current from question 1 travel? \_\_\_\_\_

3] After twelve hours the coast guard received a message. What coordinates was the raft near at that time?

LAT: \_\_\_\_\_ LONG: \_\_\_\_\_

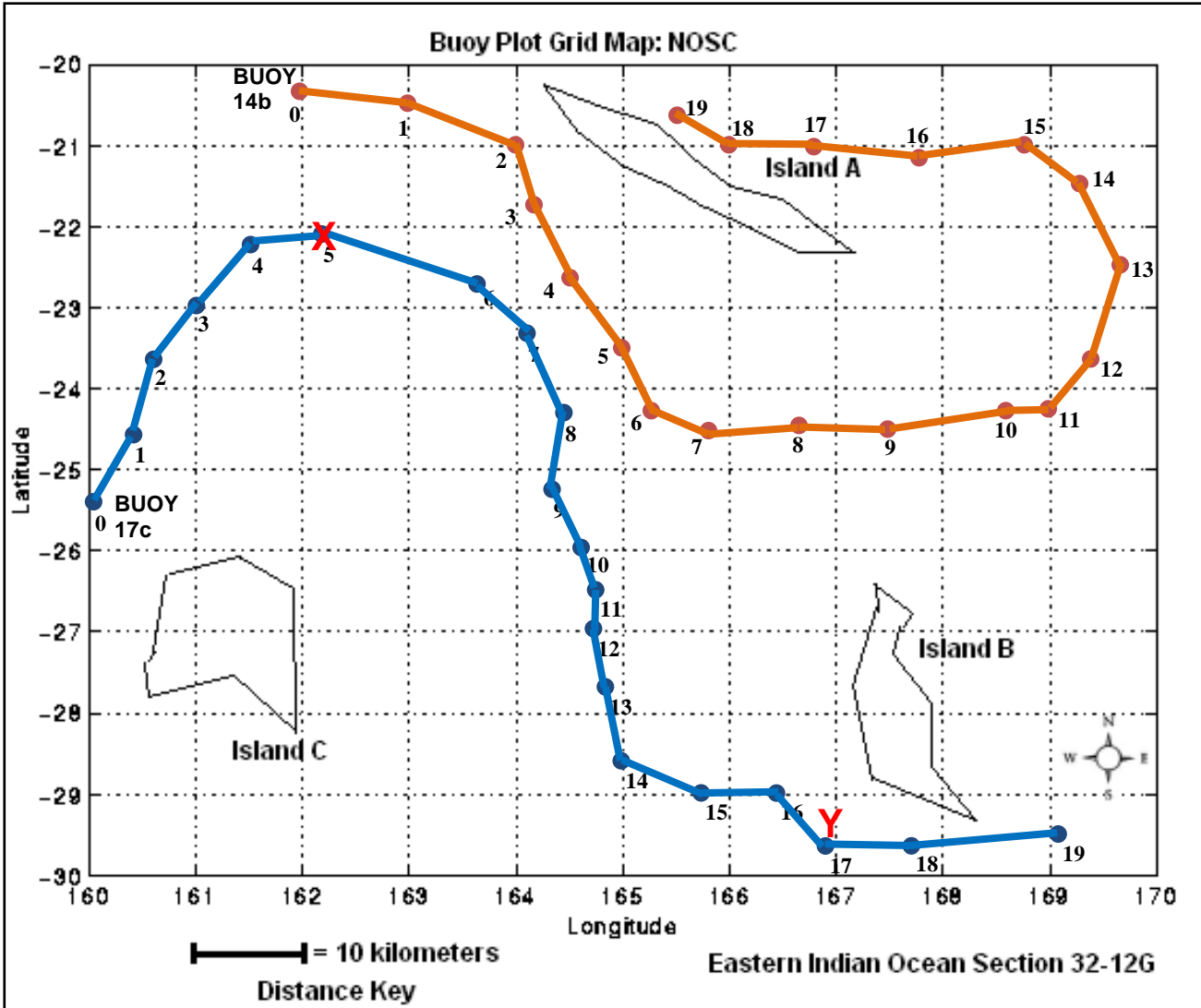
4] Which island are the sailors most likely on right now? \_\_\_\_\_

5] Using a ruler measure the distance from the Sinking Ship **X**, to the island they are currently on. Use the buoy float data to measure the path.

\_\_\_\_\_ Kilometers

6] Using the data chart, calculate the average Kilometers per hour they traveled, from sinking to location **Y**(when they radioed Land Sighting) on your map.

\_\_\_\_\_ KPH



**Step 4:** (Be sure you have complete Step 3 on previous page)  
Using the information provided from the Buoys and your completed map.  
Answer the following questions.

1] Which Buoy current did the raft most likely follow? BUOY 17c based on current data

2] What general direction does the current from question1 travel? South

3] After twelve hours the coast guard received a message. What coordinates was the raft near at that time?  
LAT: -29.60 LONG: 166.90

4] Which island are the sailors most likely on right now? Island B

5] Using a ruler measure the distance from the Sinking Ship **X**, to the island they are currently on.  
Use the buoy float data to measure the path.  
About 80 – 90 Kilometers

6] Using the data chart, calculate the average Kilometers per hour they traveled,  
from sinking to location **Y**(when they radioed Land Sighting) on your map.  
About 7 KPH