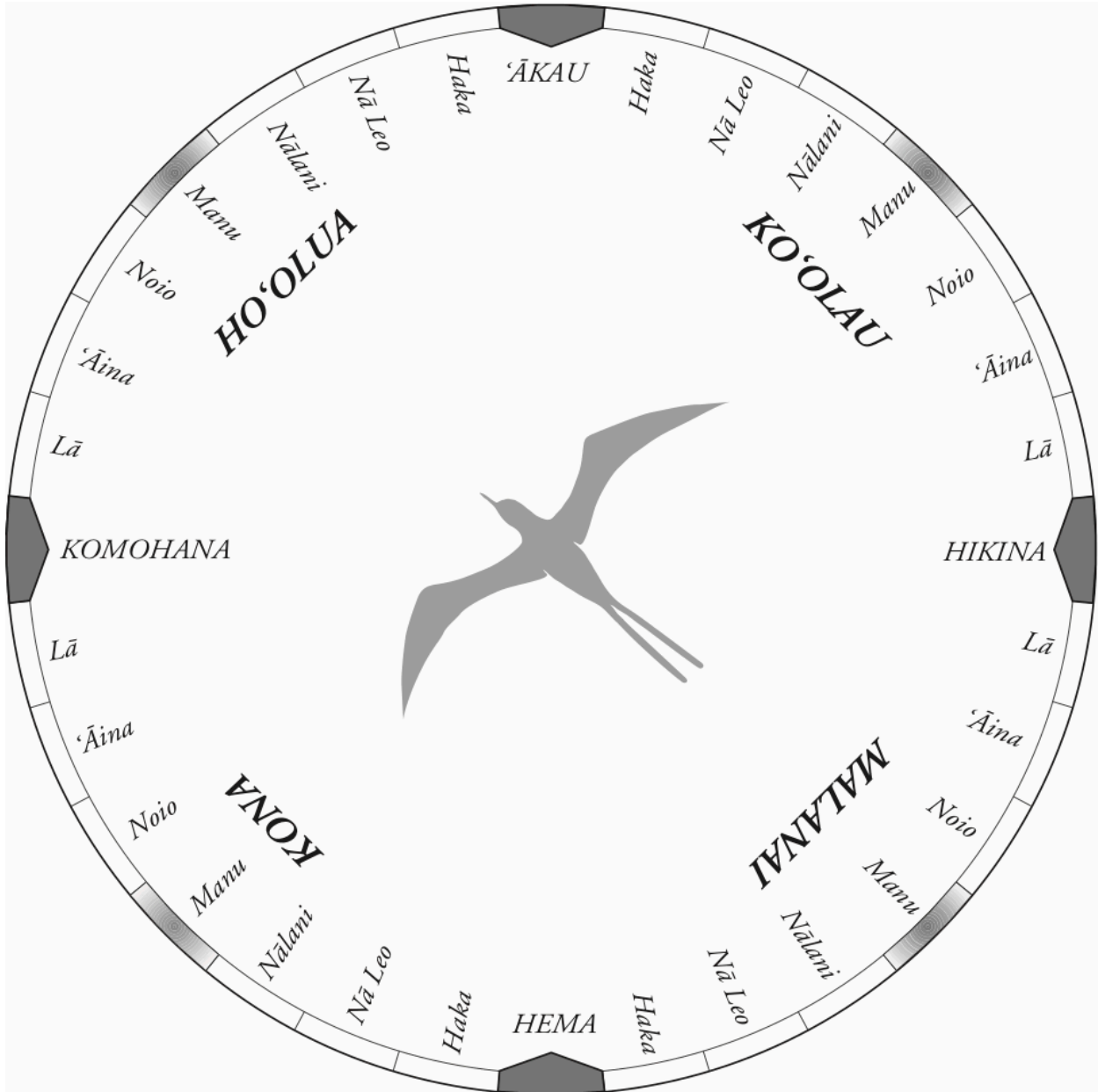


Kamehameha Schools

Hawai'i Campus - VTAM



Name: _____

Pd: _____

#: _____

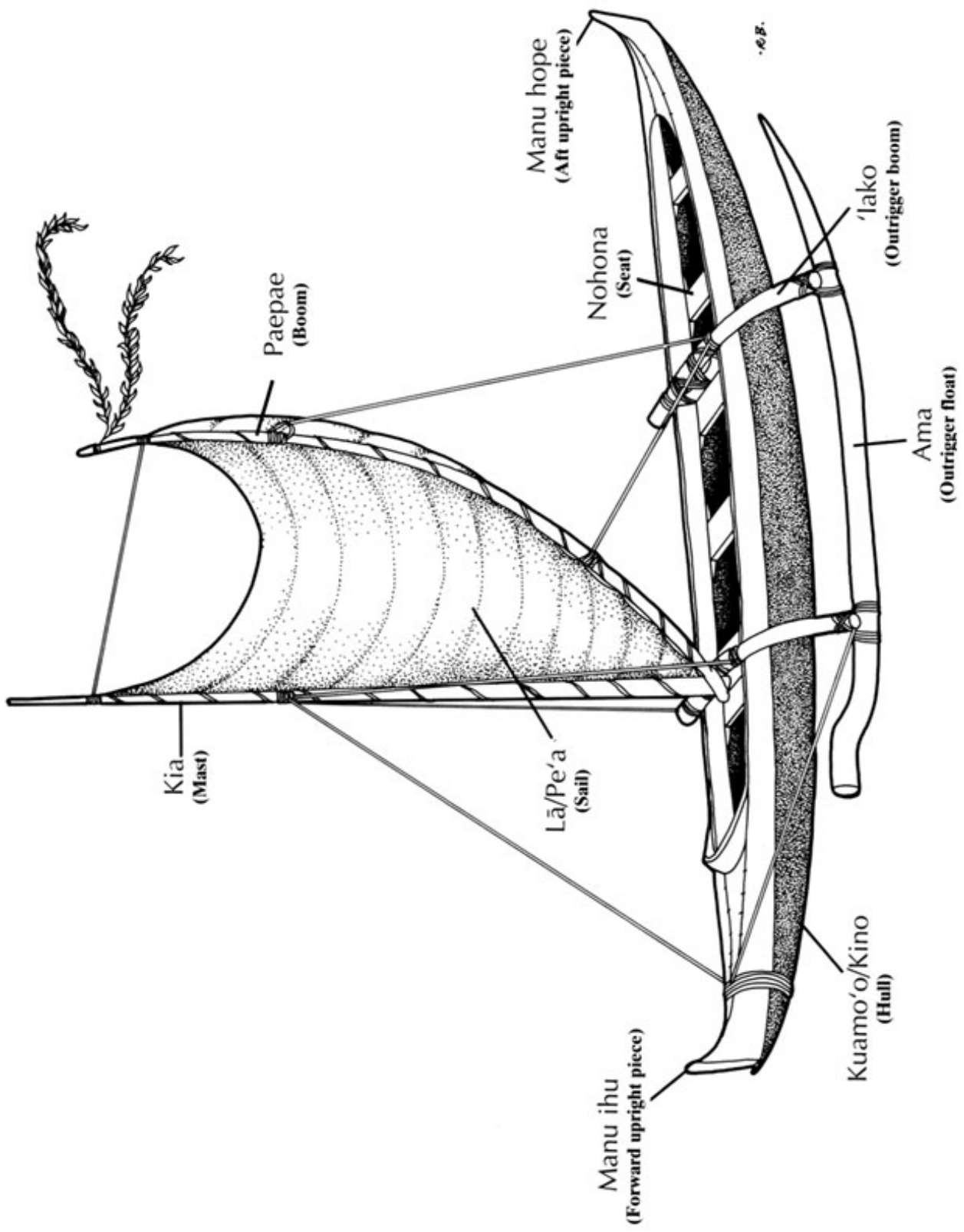


Table Group #: _____

Period: _____

Group Members

A:

B:

C:

D:

Kuleana

* Write the name of the person who is responsible for completing the following parts to your wa'a. Required Items are in bold.

Item	Person Responsible
Blueprint Drawn to scale	
Math showing the model is proportional to the foyer wa'a	
Kuamo'o/ ka'ele	
Kia & Paepae	
Hoe	
Pola	
Nohona	
'Iako	
Ama	
Pe'a	
Kaula/ Aha hoa wa'a	
Manu	

Wa'a Blueprints should contain the following:

- Mathematical proportion calculations showing your wa'a is built to scale
- Scale used to create the drawing (ie. 1/2" = 1")
- Key showing group kuleana
- Real measurements of each required part
- Drawings should be detailed and organized

	<u>Feet</u>		<u>Inches</u>		<u>Decimal Feet</u>
Example →	_____ ft.	&	_____ in.	→	_____ ft
Ka'ele: →	_____ ft.	&	_____ in.	→	_____ ft
'Iako: →	_____ ft.	&	_____ in.	→	_____ ft
Ama: →	_____ ft.	&	_____ in.	→	_____ ft
Kino: →	_____ ft.	&	_____ in.	→	_____ ft
Kia: →				→	<u>17</u> ft

Your Wa'a Data:

- Table #: _____
- Storage Bin Number: _____

Ka'ele Length: _____

Set up a proportion to calculate the following measurements below:

`Iako Length: _____

Kino Length: _____

Ama Length: _____

Kia Length: _____

*Record all Length to the nearest 1/8"

Unit Conversions Practice

Unit Conversions

- There are 5280ft in 1 statute mile
- There are 6076ft in 1 nautical mile
- There are 3280ft in 1 kilometer
- There are 60 nautical miles in 1 degree of Latitude

- 1) Convert 75 minutes to days.

- 2) Convert 46 inches to miles (there are 12 inches in one foot).

- 3) Convert 65 km to nautical miles

- 4) Convert 17 km to feet.

- 5) Convert 12 miles to nautical miles.

- 6) Convert 100 degrees of latitude into statute miles

- 7) Find your age in seconds.

Estimating Distance with Google Earth

Find the following locations and write the latitude and longitude in decimal degrees.

Location	Latitude	Longitude
Tokyo, Japan	35.6762° N	139.6503° E
Hilo, HI		
San Francisco, CA		

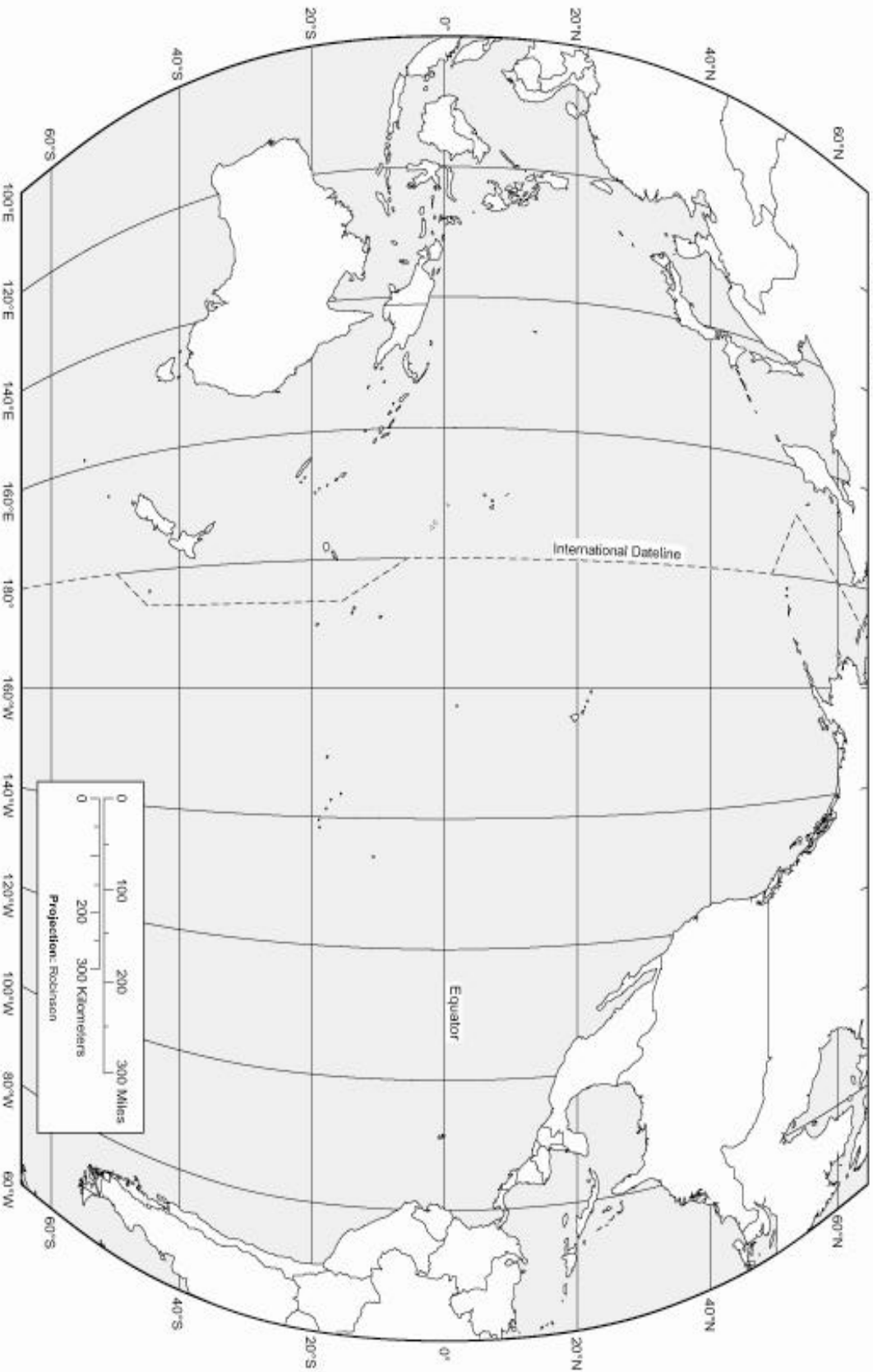
Find Four more points in the Pacific you are interested in visiting. Place a labeled pin at each location using Google earth.

Location	Latitude	Longitude

Instructions:

- Place the locations of Hilo and your four points from above on the map on page 11. Label the points.
- In Google Earth, use the ruler tool, create a line and measure the distance from Hilo to your points (save and label the measurements)
- Record the distances in miles on the map (pg. 11) from Hilo to your locations

Pacific Rim



Courtesy: Arizona Geographic Alliance
Department of Geography, Arizona State University
Barbara Trapido-Luna

VTAM – Wa‘a Test Day:

1) Wa‘a Time Trials

Trial	Distance (in)	Time (sec)	Rate (in/sec)
1			
2			
3			

2) Calculate the average rate of travel in feet per second.

3) Calculate the rate your wa‘a travelled down the trough in feet per hour (a), and miles per hour (b). There are 3600 sec in one hour. There are 5280 ft in one mile.

a. Ft/sec \rightarrow ft/hr

b. Ft/hr \rightarrow mi/hr

4) How long would it take your wa‘a to reach San Fransisco? Hilo and San Fransisco are 2320 mile apart.

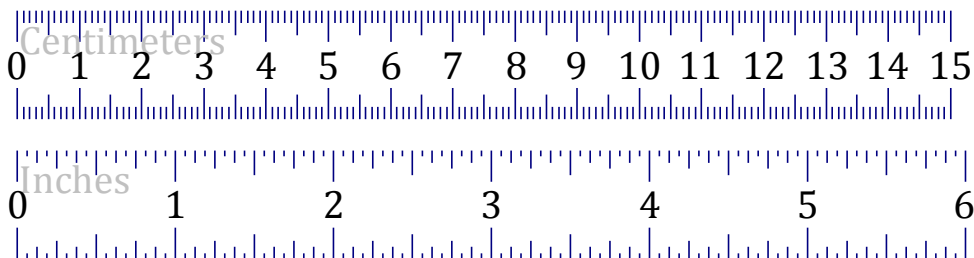
5) Draw and calculate the volume of water in the trough in in^3 .

6) Convert cubed inches to gallons of water given the ratio $4\text{in}^3 = 0.017\text{gallons}$

7) Calculate how much time in minutes it would take to empty the trough using a pump that operates at 80 Liters per min. There are .26 gallons in one liter.

Converting Inches and Centimeters (A)

Use the rulers to convert inches (nearest $\frac{1}{8}$) and centimeters (nearest 0.1).



$$1.6 \text{ cm} = \underline{\hspace{1cm}} \text{ in}$$

$$7.3 \text{ cm} = \underline{\hspace{1cm}} \text{ in}$$

$$4 \frac{3}{8} \text{ in} = \underline{\hspace{1cm}} \text{ cm}$$

$$1.6 \text{ cm} = \underline{\hspace{1cm}} \text{ in}$$

$$15.2 \text{ cm} = \underline{\hspace{1cm}} \text{ in}$$

$$3 \frac{3}{8} \text{ in} = \underline{\hspace{1cm}} \text{ cm}$$

$$3 \frac{5}{8} \text{ in} = \underline{\hspace{1cm}} \text{ cm}$$

$$2.5 \text{ cm} = \underline{\hspace{1cm}} \text{ in}$$

$$1 \frac{3}{4} \text{ in} = \underline{\hspace{1cm}} \text{ cm}$$

$$9.5 \text{ cm} = \underline{\hspace{1cm}} \text{ in}$$

$$1 \frac{7}{8} \text{ in} = \underline{\hspace{1cm}} \text{ cm}$$

$$1.0 \text{ cm} = \underline{\hspace{1cm}} \text{ in}$$

$$4 \frac{5}{8} \text{ in} = \underline{\hspace{1cm}} \text{ cm}$$

$$4 \frac{1}{2} \text{ in} = \underline{\hspace{1cm}} \text{ cm}$$

$$9.5 \text{ cm} = \underline{\hspace{1cm}} \text{ in}$$

$$4 \frac{1}{8} \text{ in} = \underline{\hspace{1cm}} \text{ cm}$$

Notes

Reflections

#1

#2

#3

#4

Lab Goals

Aloha Parents and Guardians,

This school year the 7th grade will be working in the VTAM lab to complete their wa'a unit. During this process the students will be using the tools listed below. The students will review tool safety and pass tool tests prior to lab use. Please sign and return by Sept 16th, 2019 to confirm your authorization of the tool use. If for any reason there is a tool you do not want your child to use, draw a line through the tool.

Tools to be used:

- Drill
- Orbital Sander
- Band saw
- Scroll saw
- Belt sander
- Files & surform rasps
- Rotary tool (dremel)

Sincerely,

Kumu Brendan Courtot
Kamehameha Schools Hawai'i Campus
Phone: 982-0443
Email: brcourto@ksbe.edu

Student Name: _____

Parent/Guardian Name: _____

Parent/Guardian Signature _____