

Map the Hike

Lesson 12

Name: _____

Date: _____

Vocabulary

Latitude - an imaginary line that measures distance north or south of the equator

Longitude - an imaginary line that measures angular distance east or west of the prime meridian

Distance - the four main compass directions: North, South, East, and West

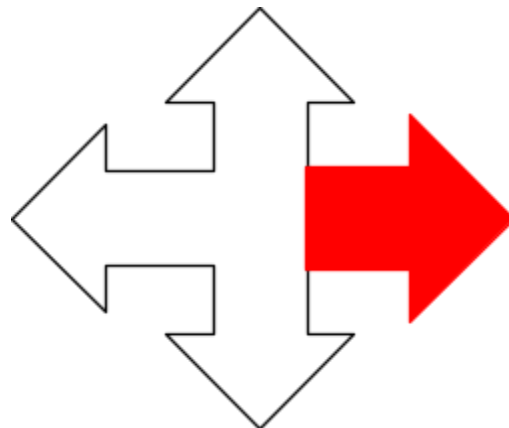
Activity 1

Drawing Lines with Compass and Distance

Using the Ari Compass and Distance applications, you'll draw three lines according to the direction and distance provided.

1

1. Place the Ari on the four-way arrow.
2. Orient the Compass application with the **On a Map** setting, with North matching the direction of the red arrow.
3. Locate **SW** on the Compass application.
4. Open the Distance application.
5. Draw a **1.2 inch** line extending **SW** from the point of the red arrow.



2

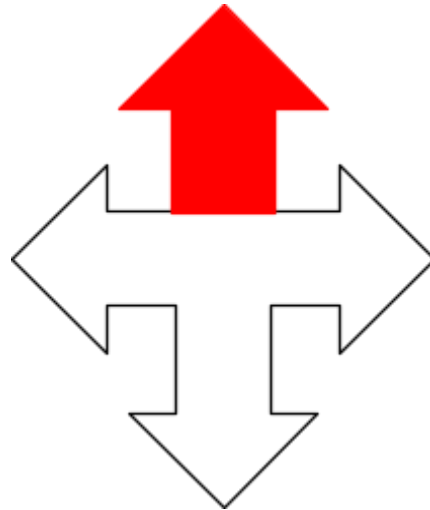
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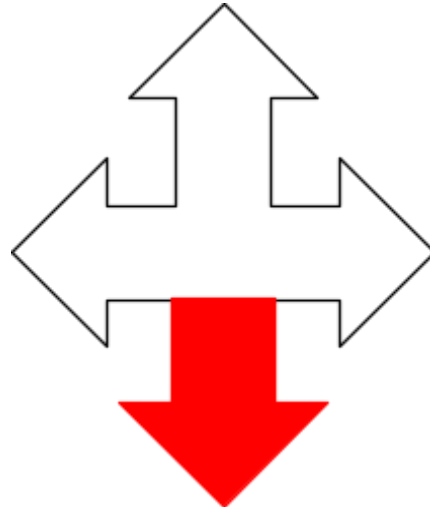
Date: _____

1. Place Ari on the four-way arrow.
2. Orient the Compass application with the **On a Map** setting, with North matching the direction of the red arrow.
3. Locate **E** on the Compass application.
4. Open the Distance application.
5. Draw a **0.7 inch** line extending **E** from the point of the red arrow.



3

1. Place Ari on the four-way arrow.
2. Orient the Compass application with the **On a Map** setting, with North matching the direction of the red arrow.
3. Locate **NE** on the Compass application.
4. Open the Distance application.
5. Draw a **1.8 inch** line extending **NE** from the point of the red arrow.



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Activity 2

Drawing Hikes

Using the Ari Compass and Distance applications, you'll map out a hike. Place Ari on the compass image after selecting the Compass application with the **On a Map** setting to orient it to your map. At the start, end, and markers throughout your hike, draw an X.



Hike #1

Start Location:

- Latitude: 41°N
- Longitude: 75° 15'W

Marker #1

- Draw a 28mm line NE and place a marker

Marker #2

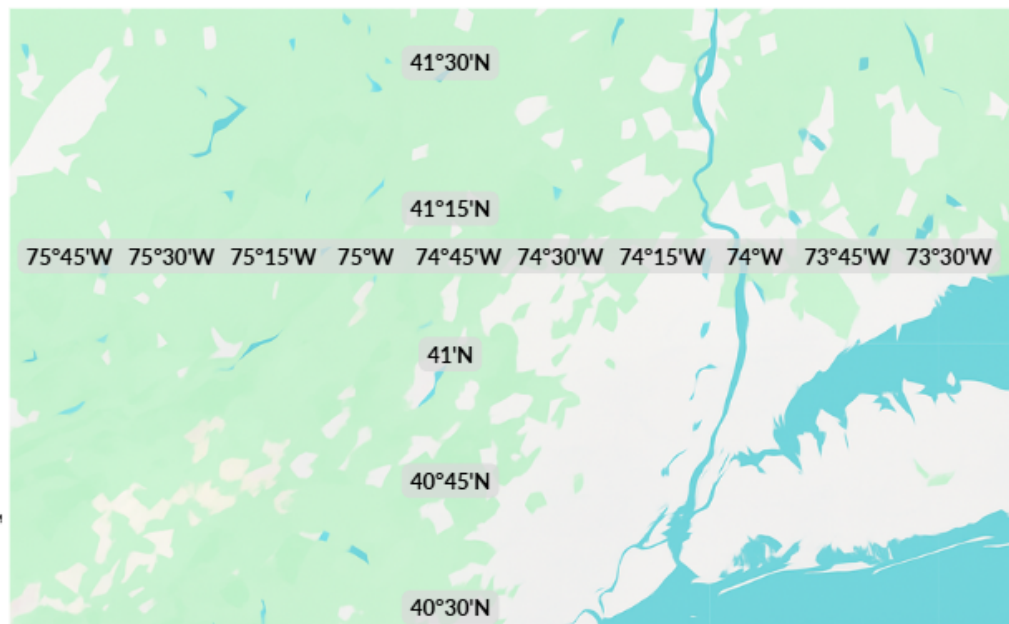
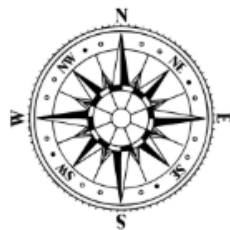
- Draw an 18mm line NE and place a marker

Marker #3

- Draw an 11mm line E and place a marker

Marker #4

- Draw a 16mm line NE and place a marker



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Start Location:

- Latitude: $27^{\circ} 59' 45''$ N
- Longitude: $86^{\circ} 50' 35''$ E

Marker #1

- Draw a 22mm line NNE and place a marker

Marker #2

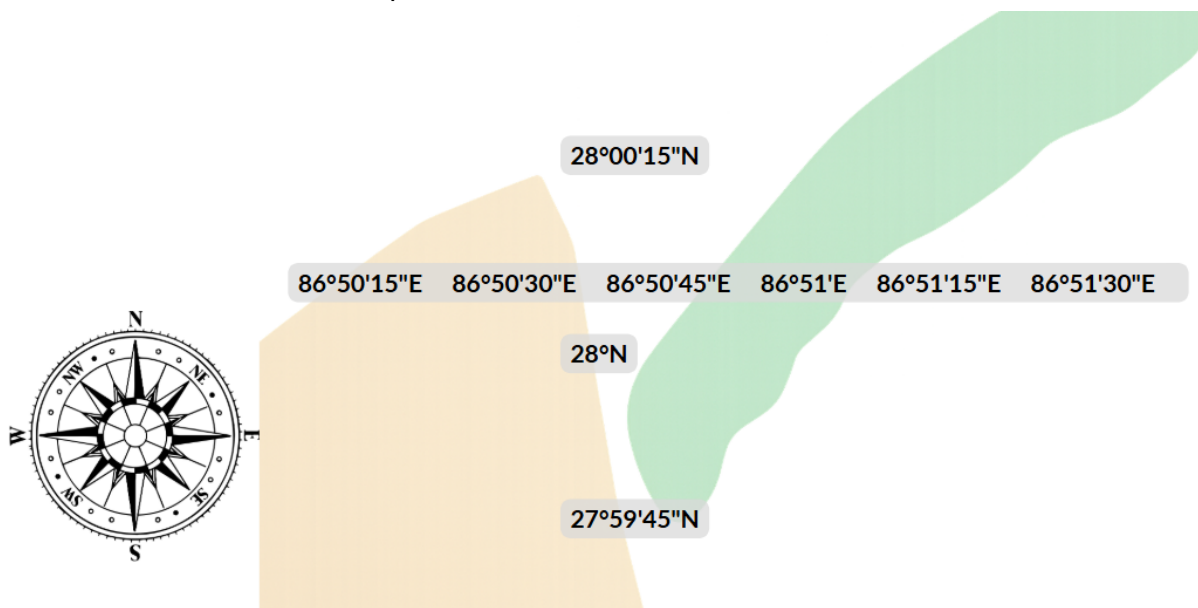
- Draw a 14mm line NE and place a marker

Marker #3

- Draw a 6mm line NE and place a marker

Marker #4

- Draw a 7mm line E and place a marker



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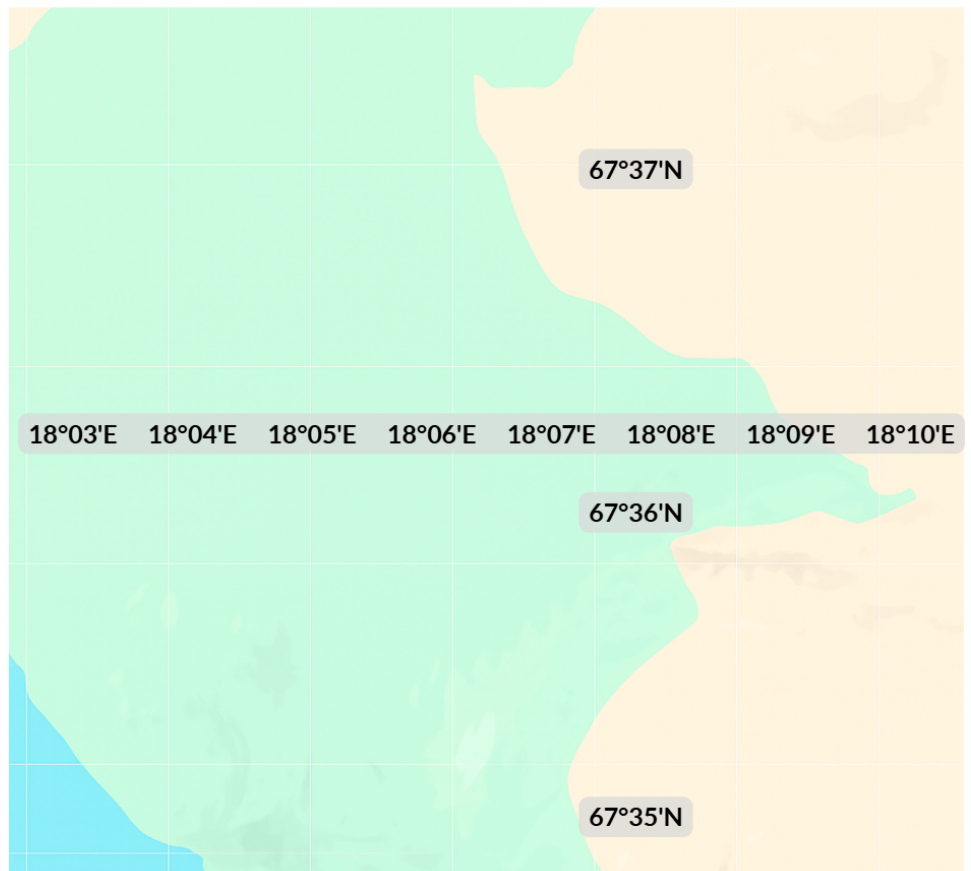
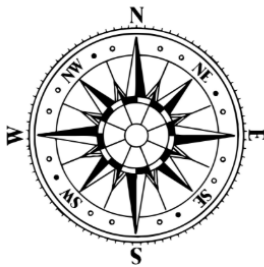
3

Start Location:

- Latitude: $67^{\circ} 35' \text{N}$
- Longitude: $18^{\circ} 05' 50'' \text{E}$

Marker #1

- Draw an 82mm line N and place a marker



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Exit Ticket

Please respond to the following prompts.

Criteria for Success:

- Correct use of latitude and longitude information to locate a position.
- Use information from the lesson and personal experiences with the Ari applications to increase accuracy and infer the results of misuse.

1. Refer to a physical or online map/atlas, based on the latitude and longitude provided and the hikes you drew, where were you hiking for hike #1, hike #2, and hike #3?

2. Describe how you combined data from the Compass and Distance applications to ensure the accuracy of your map. How would your results change if either tool were misused?
