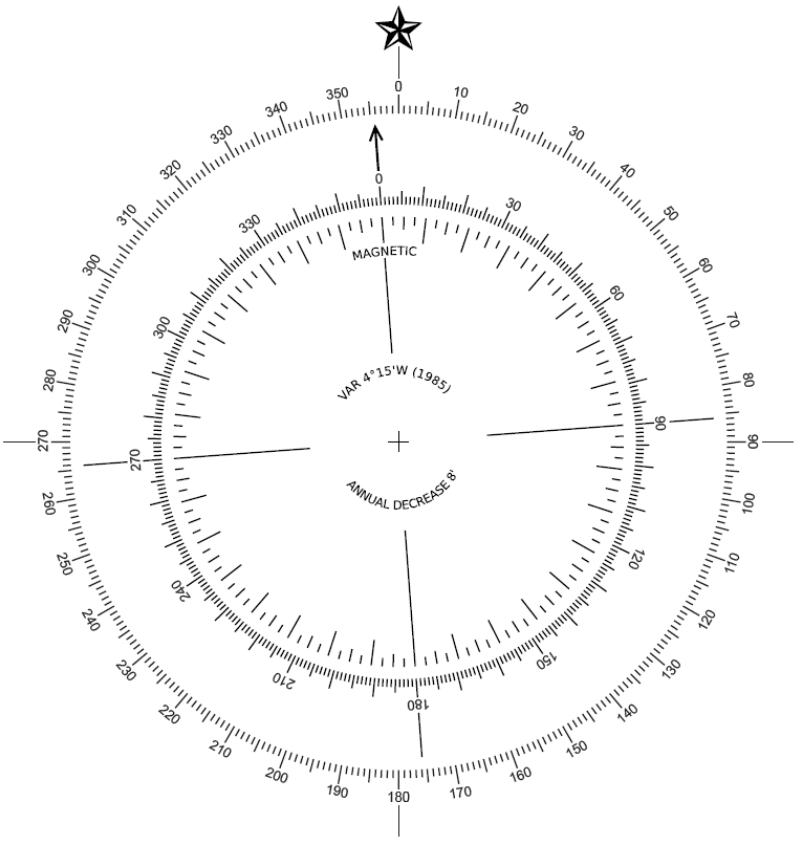
Name: _____

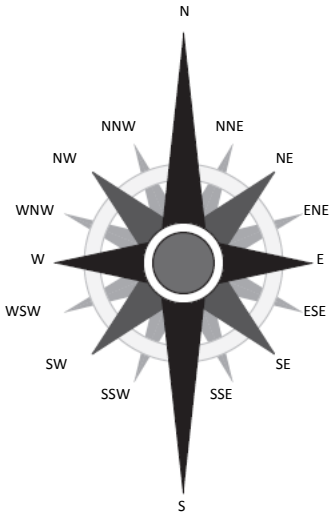
Unit 4 – Geometry

4.3 – Bearings

- Angles can be used to express direction in navigation and mapping.
- All angle measurements used in navigation are measured relative to ***true north*** (geographic north).



- ***Magnetic North*** is the direction that a compass will point when it lines up with the Earth's magnetic field.
- ***True Bearing*** is the angle measured **<u>CLOCKWISE</u>** between true north and an intended path or direction, measured in degrees.
- a ***Compass Rose*** is a diagram used to relate bearings to direction. It includes the four cardinal directions (N, E, S and W) plus 12 intercardinal (intermediate) directions.



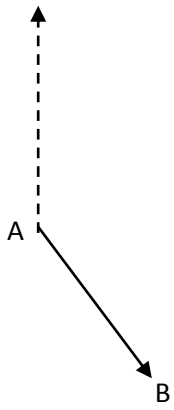
- Since there are 16 directions, each point in a compass rose is worth $\frac{360°}{16} = 22.5°$
- The degree measurement at a point is (Number of points from True North) x 22.5° .

1. E
2. SE
3. SW
4. WNW

- We can determine the **True Bearing** between any two points by measuring the angle between true north and the segment containing the two points.
- You will need a protractor to measure the angle involved.

Examples: Determine the true bearing between A and B.

a)



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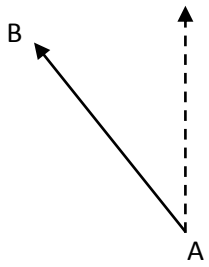

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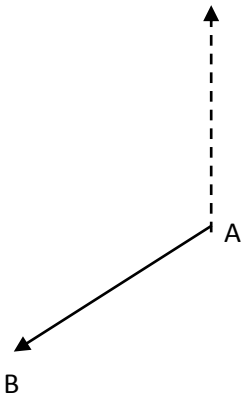

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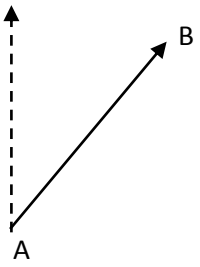
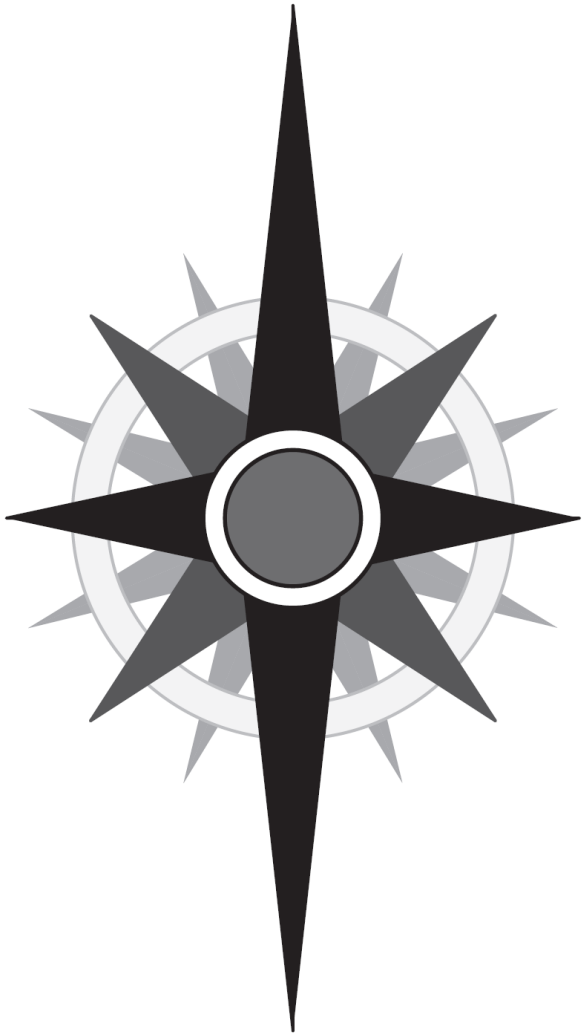


Assignment

1. Use the compass rose below to answer the following questions.

   a) Label the four cardinal and twelve intercardinal directions on the compass rose below.

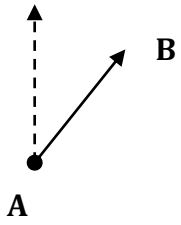


   b) Complete the table below based on the compass rose to the left. Start with North and work your way around clockwise.

TRUE BEARING	
Direction	*Bearing*
N	

2. Determine the **True Bearing** between A and B. Use your protractor to determine the angle.

a)



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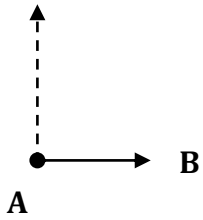

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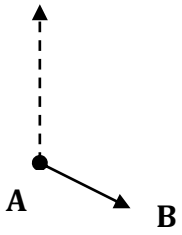

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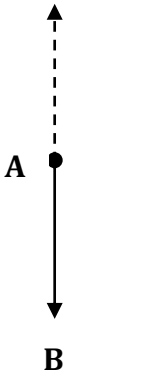

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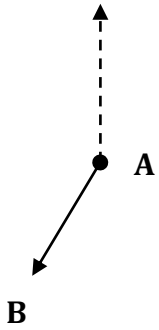

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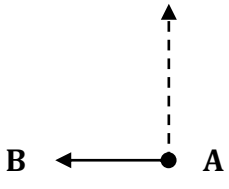

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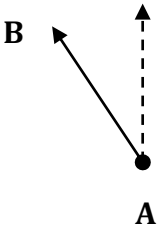

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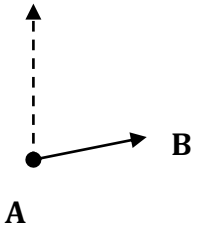
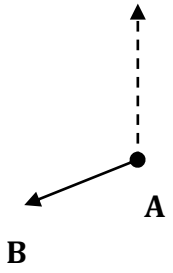
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