

POST TEST

Star Navigation: Explorations into Angles and Measurement

**A 6th grade module
in**

**Math in a Cultural Context
UNIVERSITY OF ALASKA FAIRBANKS**

Student Name:
Grade:
Teacher:
School:
Location of School:
Date:

* *This project has been funded by the U.S. Department of Education, *Determining the Potential Efficacy of 6th grade Math in a Cultural Context Project*, Jerry Lipka, P.I.

Note: Students need a protractor for this test

Total Score:

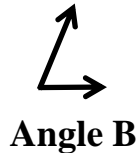
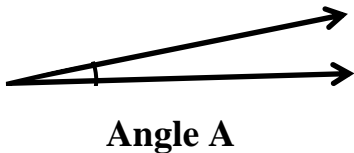
1. What is an angle? Draw a picture and explain.

2. What is an obtuse angle? , circle the correct answer.

- a. An angle smaller than a right angle.
- b. An angle larger than a right angle but smaller than a straight line.
- c. An angle larger than a straight line.
- d. An angle almost a full circle.

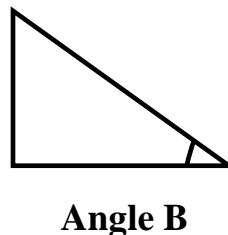
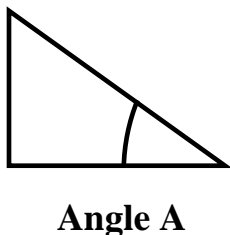
3. Looking at the angles marked below, circle the correct answer.

- a. The measure of Angle A is greater than the measure of angle B.
- b. The measure of Angles A and B are the same.
- c. The measure of Angle B is greater than the measure of angle A.
- d. Can't tell from the given information



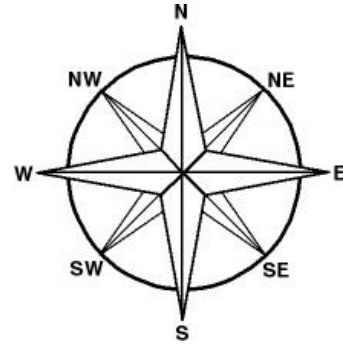
4. The two triangles below are the same. Looking at the angles marked, circle the correct answer.

- a. The measure of Angle A is greater than the measure of angle B.
- b. The measure of Angles A and B are the same.
- c. The measure of Angle B is greater than the measure of angle A.
- d. Can't tell from the given information.



Use the following information for questions 5, 6, and 7.

Here is a compass. You can read a compass using “compass degrees.” For example, North (N) is at 0 degrees and East (E) is at 90 degrees. Use the compass, answer the following questions.



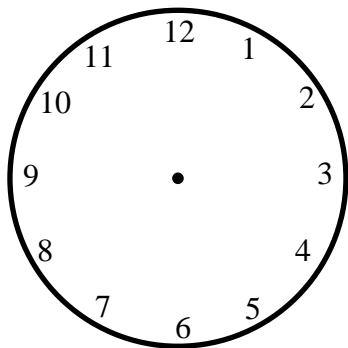
5. What is the compass degree reading for South (S)? Circle the correct answer.

- a. 45 degrees
- b. 90 degrees
- c. 180 degrees
- d. 270 degrees
- e. 360 degrees

6. What direction has a compass degree reading of 45 degrees?

7. What is the compass degree reading for South East (SE)?

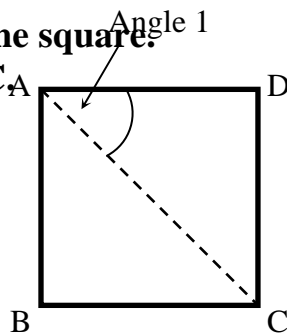
8. If this clock shows 8 o'clock, what is the angle between the hour and minute hands?
 a. Draw in the hands b. Give the measure of the angle using degrees.



Angle Size

9. Here is a square. Angle A is the upper left corner of the square.
 Angle A is divided into two equal parts by the line AC.

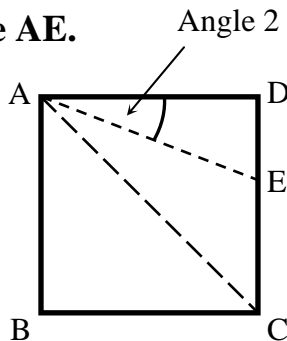
What is the measure of Angle 1? _____






10. Here is the same square from Question #9.

Angle 1 is now broken into two equal parts by the line AE.

What is the measure of Angle 2? _____

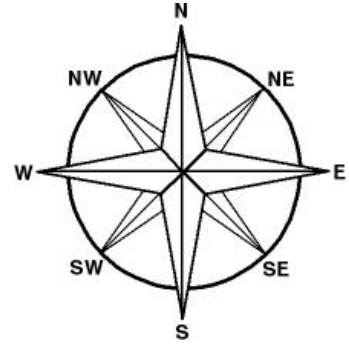


11. Complete the following table.

Picture	Is this an angle?	Why or why not?
a. 		
b. 		
c. 		

12. Follow the directions and find your way home.

- a. Begin at Start Here, location: 5E**
- b. Move two spaces directly North. Mark an X on the location and write the coordinates here: _____**
- c. Move one space in a NE direction. Mark an X on the location and write the coordinates here: _____**
- d. Now move three spaces East. Mark an X on the location and write the coordinates here: _____**



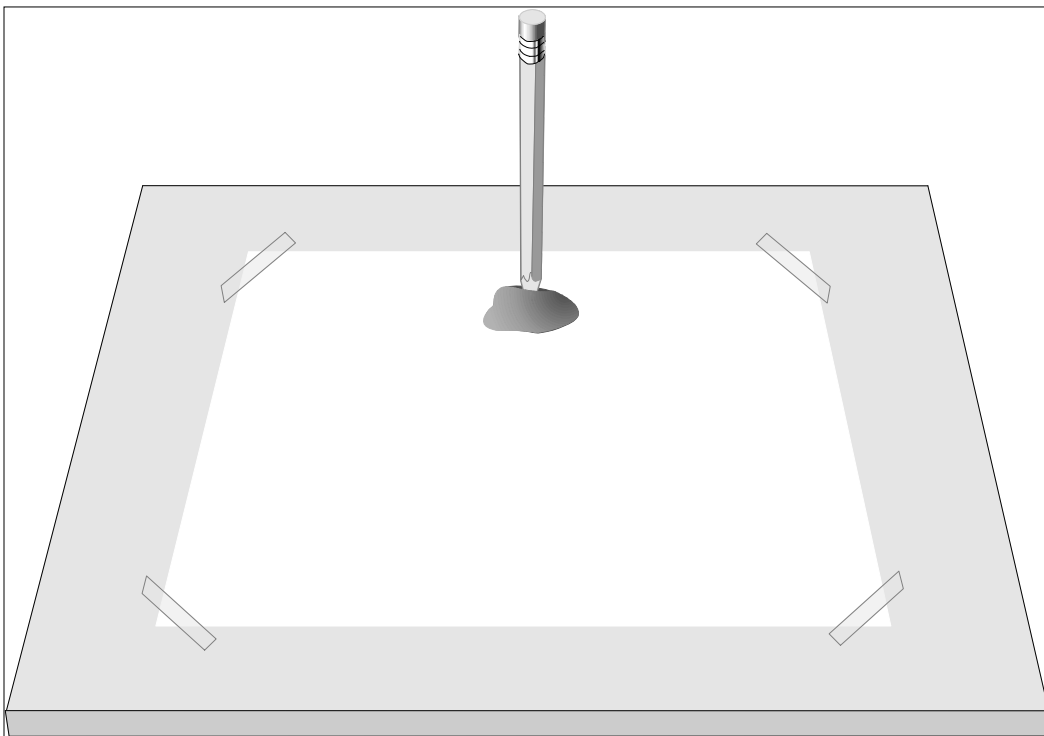
A									
B									
C									
D									
E				START HERE					
F									
G									
H									
I									
	1	2	3	4	5	6	7	8	9

13. Here is shadow data collected in Alaska.

- a. What time shows the shortest shadow? _____
- b. What direction in the sky would you find the sun? Circle the correct answer
 - i. East
 - ii. South
 - iii. North
 - iv. West

Time	Shadow Data
9 am	10 feet
11 am	6 feet
1 pm	5 feet
3 pm	6 feet
5 pm	10 feet

- c. The sun shines on a sundial. Use the Time and Shadow Data table and represent (draw it) the data. Draw and label the data.



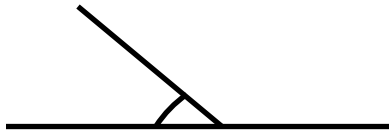
Turn in this part of the test to your teacher.

Complete this page with a protractor.

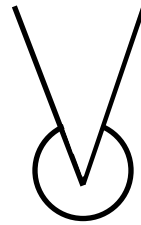
Name: _____

Teacher's Name: _____

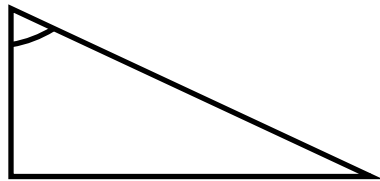
14. Use a protractor to measure the marked angle in each object below. Place your answer in degrees on the line under the angle.



a) _____



b) _____



c) _____

15. Use a protractor to divide this angle into 3 equal angles. What is the measure of each angle you drew in degrees?

