

Name _____

Date _____

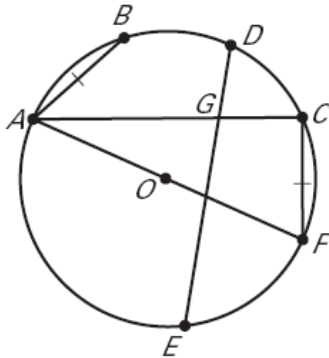
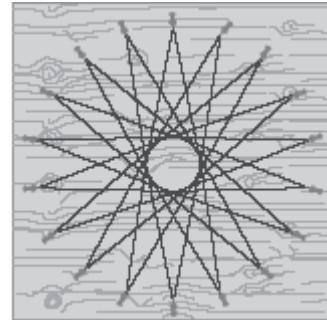
Open-ended Task: Geometry Chapter 10

Directions:

To receive full credit you must do the following:

1. Show OR describe each step of your work, even if you did it in your head (“mental math”) or used a calculator,
AND
2. Write an explanation stating the mathematical reason(s) why you chose each of your steps.

Question: You can use a circle to create string art. Draw a circle on a piece of wood and place push pins or tacks on the circle. Then wrap a piece of string around the tacks. A completed string art piece is shown at the right. Use the incomplete string art piece to answer the questions.



A. Suppose $\angle AOB = 47^\circ$. Find the measure of arc BCF and arc BAF.

B. Suppose that $\angle AEB = 22^\circ$. Find the measure of arc FC.

C. Suppose the measure of arc $ABD = 90^\circ$ and arc $CFE = 100^\circ$ Find $\angle CGE$

D. Suppose that $AG = x + 7$, $GC = x$, $DG = x + 1$, and $GE = x + 5$
Find DE and AC