

Name _____

Date _____

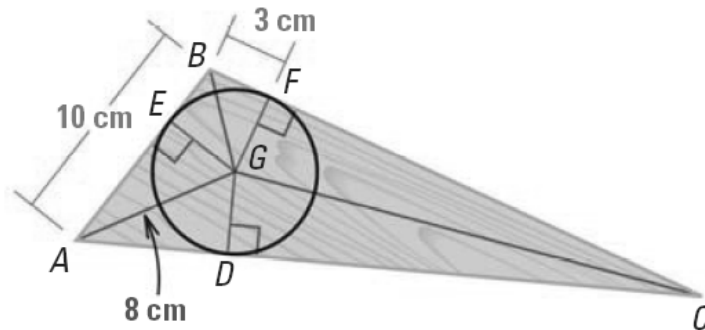
Open-ended Task: Geometry Chapter

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: A woodworker is trying to cut as large a wheel as possible from a triangular scrap of wood. The wheel just touches each side of the triangle as shown below.



- A. Which point of concurrency is the woodworker using for the center of the circle?
What type of special segments are BG, CG, and AG?

B. Which postulate or theorem can you use to prove that $\triangle BGF \cong \triangle BGE$?

C. Find the radius of the wheel to the nearest tenth of a centimeter.