

Name: _____
 Geometry

Date: _____
 Band: _____

Unit 9: Circles Performance Tasks

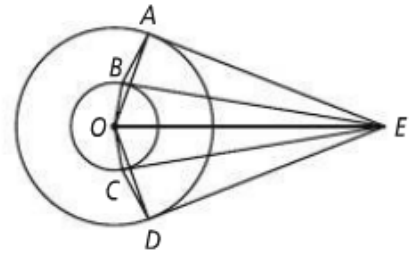
Instructions: Choose one performance task. Write all your work on a separate clean piece of paper and attach it to this page.

Big Idea: Reasoning and Proof

You can use triangle congruence theorems to prove relationships among tangents and secants.

Performance Task 1

Four tangents are drawn from E to two concentric circles. A , B , C , and D are the points of tangency. Name as many pairs of congruent triangles as possible and tell how you can show each pair is congruent.

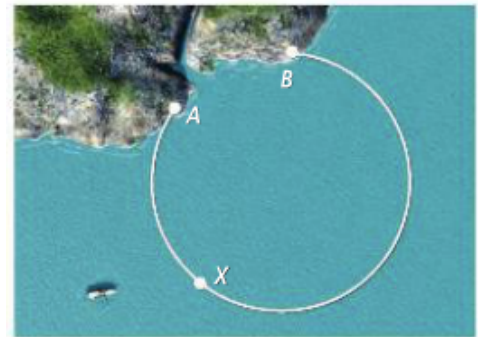


Big Idea: Measurement

You can use facts about arcs and angle measures to solve real-world problems.

Performance Task 2

The rocks near the shore between two lighthouses at points A and B make the waters unsafe. The measure of \widehat{AXB} is 300. Waters inside this arc are unsafe. Suppose you are a navigator on a ship at sea. How can you use the lighthouses to keep the ship in safe waters? Explain your answer.



Big Idea: Coordinate Geometry

You can use coordinates of the center of a circle and its radius to write an equation of a circle.

Performance Task 3

A gardener wants the three rosebushes in her garden to be watered by a rotating water sprinkler. The gardener draws a diagram of the garden using a grid in which each unit represents 1 ft. The rosebushes are at $(1,3)$, $(5,11)$, and $(11,4)$. She wants to position the sprinkler at a point equidistant from each rosebush. Where should the gardener place the sprinkler? Show your work. What equation described the boundary of the circular region that the sprinkler will cover?

Performance Task Assessment: Analytic Holistic Scoring**Developing Autonomy—The student**

3	Persevered to complete the problem without help
2	Completed most of the problem without help
1	Needed key hints to complete the problem
0	Needed extensive guidance to work the problem

The Solution Process—The student’s work showed

3	A complete and appropriate solution process
2	An appropriate solution process that is almost complete
1	An appropriate process that is partially complete
0	An inappropriate process or no evidence of a process

The Conclusion/Answer—The student’s answer is an

3	Accurate conclusion, supported by valid evidence and reasons, appropriate to this problem and context
2	Inaccurate but logical conclusion, supported by evidence and reasoning but incorrect due to a minor factual error (in details of problem, in computation, recall a formula, etc.) or minor mistake in reasoning
1	Inaccurate but logical conclusion that overlooks, or gets wrong significant facts (about the problem, the rule, computation, etc.)
0	Inappropriate conclusion: not supported by facts and logic, or there is no conclusion

Teacher Comments: