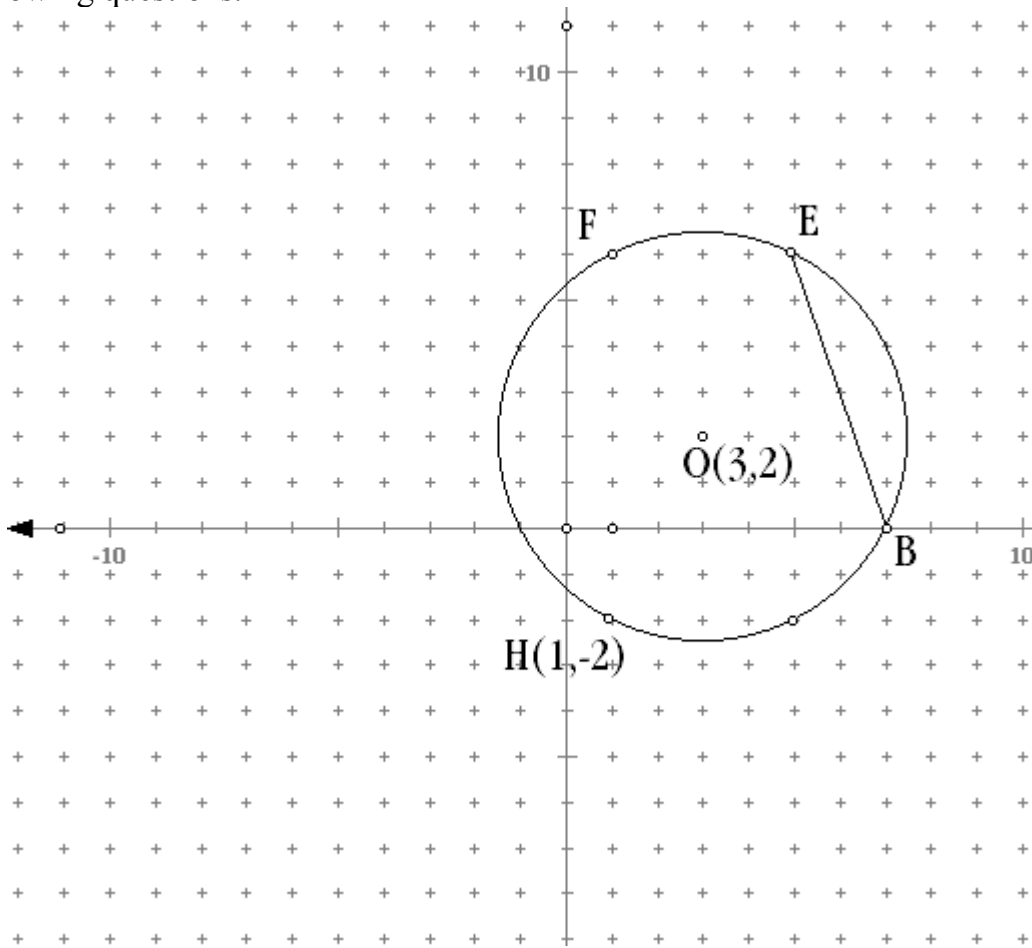


Name _____

Take Home Question:

Use your new conjecture from this chapter and ideas from earlier chapter to answer the following questions.



1. Find the slope of \overline{BE} . _____
2. Write the equation that contains \overline{BE} _____
3. Find the midpoint of \overline{BE} and label it point C. What are the coordinates of point C?

4. Draw in the perpendicular bisector of \overline{BE} . Find the slope of this perpendicular bisector. _____
5. Write the equation of this perpendicular bisector of \overline{BE} . _____
6. Using your equation and the picture, name the coordinates of the y-intercept for the perpendicular bisector of \overline{BE} . _____
7. Label the point D(-1,4) and draw chord DE.
8. Write the equation of the line containing chord DE. _____
9. Find the midpoint of chord DE. Label this point F. Name the coordinates of point F. _____
10. Find the slope of chord DE. _____
11. Draw in the perpendicular bisector of chord DE. Find the slope of this perpendicular bisector of chord DE. _____
12. Write the equation of this perpendicular bisector of chord DE. _____
13. What is the relationship between the chords DE and BE? _____
14. Draw the tangent line through point H. Draw the radius to the point of tangency.
Label the angle that must exist between the tangent line and the radius drawn to the point of tangency.
15. Write the equation of the tangent line. _____

Due Date _____