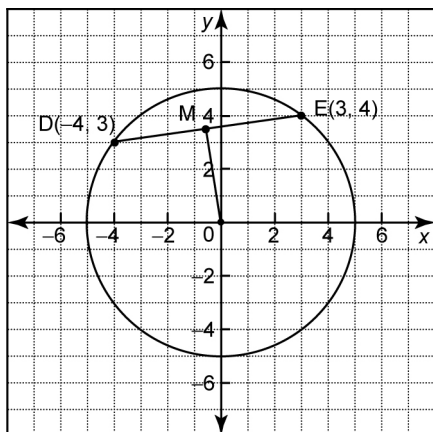Name: _____   Date: _____

Section 3.5 Practice Master

1. a) Find the coordinates of the midpoint, M, of DE.
   b) Find the slope of chord DE.
   c) Verify that OM is perpendicular to DE.

2. a) Verify that the points K(−2, 4), L(4, 4), and M(3, −1) are equidistant from the point C(1, 2).
   b) Draw the circle that passes through the points K, L, and M.

3. a) Explain how you know that the origin is the centre of the circle represented by $x^2 + y^2 = 34$.
   b) Verify that the points A(−3, 5) and B(−5, −3) lie on the circle.
   c) Verify that the line through the origin and the midpoint of the chord AB is perpendicular to the chord.

4. a) Verify that the centre of this circle lies on the right bisector of the chord XY.
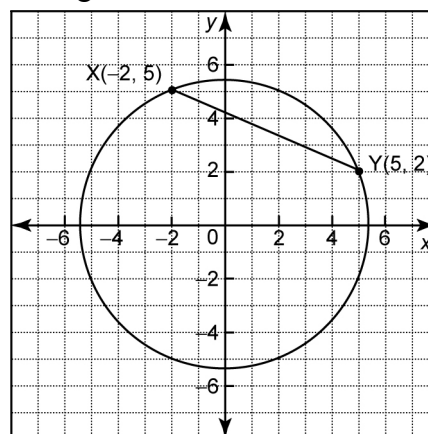
   b) Find the radius of the circle.

5. Find the centre of the circle that passes through the points D(−5, 6), E(−2, 7), and F(2, 5).

6. Use Technology Use geometry software to answer question 5. Outline your method.

7. For this circle, the diameter is AB and a point on the circle is C. Verify that ∠ACB = 90°. Explain your reasoning.