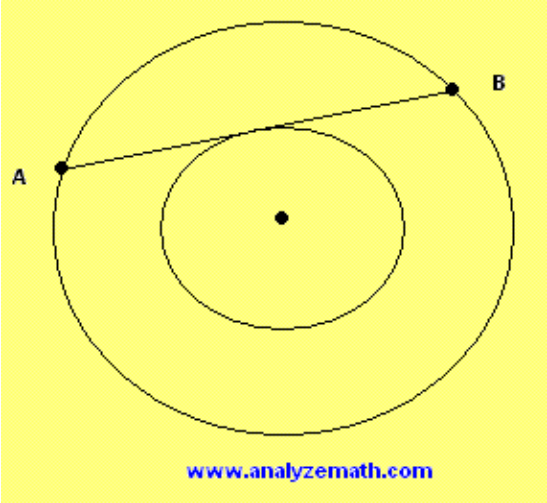
Quiz:

1) What New Jersey Shore town was summer home to seven Presidents of the United States?

- a) Perth Amboy
- b) Spring Lake
- c) Long Branch
- d) Cape May

Problem:

• The two circles below are concentric (have same center). The radius of the large circle is 10 and that of the small circle is 6. What is the length of the chord AB?



Solutions to the Above Problems

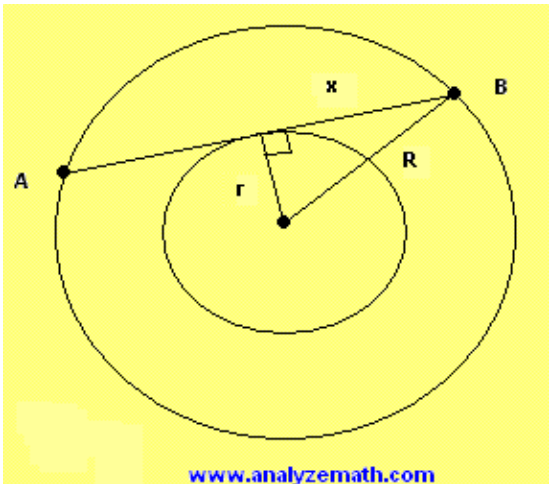
1. If we draw a radius in the small circle to the point of tangency, it will be at right angle with the chord.(see figure below). If x is half the length of AB, r is the radius of the small circle and R the radius of the large circle then by Pythagora's theorem we have:

$r^2 + x^2 = R^2$

$6^2 + x^2 = 10^2$

Solve for x: x = 8

Length of AB = 2x = 16



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