

Introduction to Circles and Tangents



Overview of problems



Example Set: A

Answer the true or false questions- make sure to justify your conclusions

A diameter is always the longest chord in a circle?

A tangent is a point?

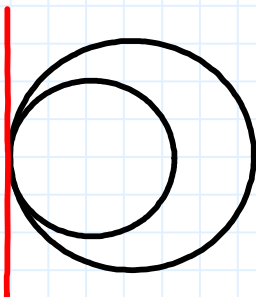
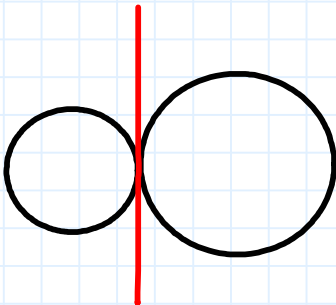
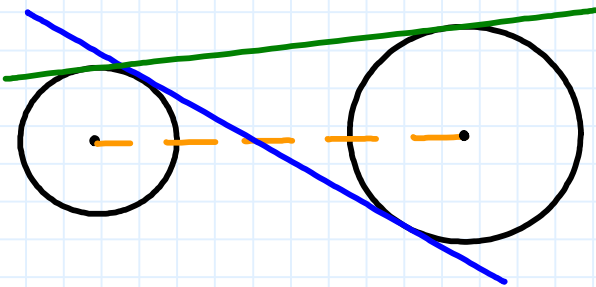
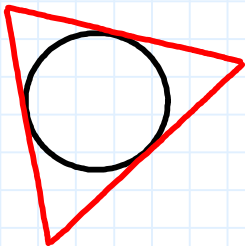
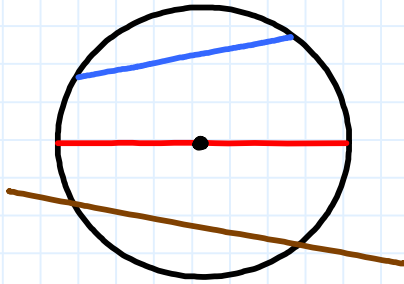
A secant can pass through the radius?

A circle can have a tangent that forms an acute angle with the radius?

A circle can be defined as the set of all points equidistant from a point?



Example Set: B



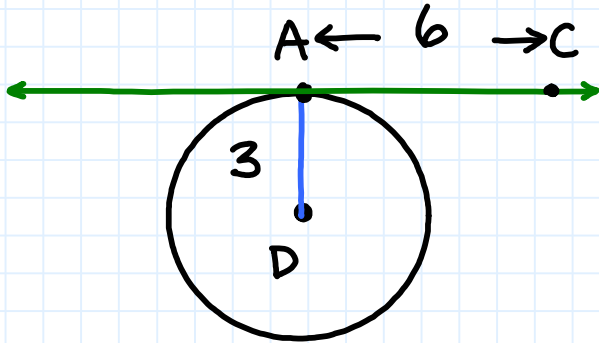
Label the parts of each pictures with the following terms:

- * *secant*
- * *externally tangent*
- * *point of tangency*
- * *common external tangent*
- * *inscribed circles*
- * *diameter*
- * *chord*
- * *common internal tangent*
- * *internally tangent*
- * *radius*
- * *center*

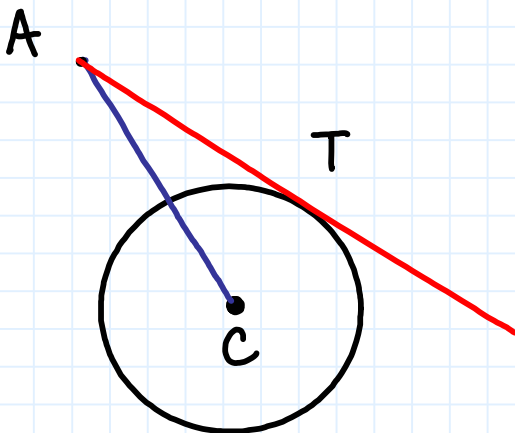


Example Set: C

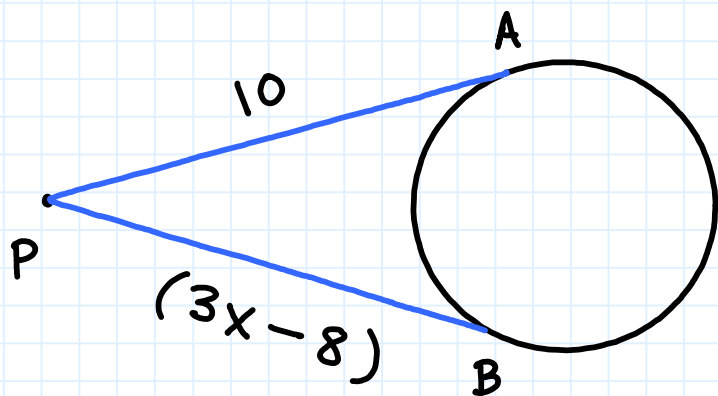
The line is tangent to the circle at point A. Find the distance of DC.



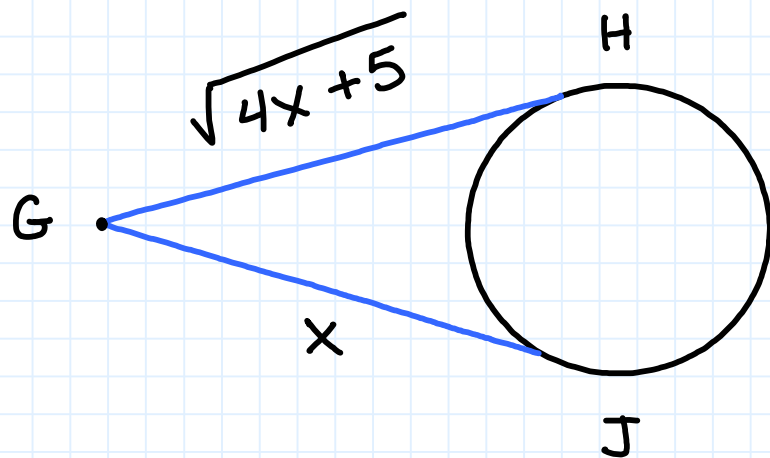
AT is tangent to circle C at point T. Find the diameter of the circle given $AT=7$ and $AC=12$.



Find the value of x given both lines are tangents to the circle from P .



Find the value of x given both lines are tangents to the circle from G .



Introduction to Circles and Tangents



Overview of problems- KEY



Example Set: A

Answer the true or false questions- make sure to justify your conclusions

A diameter is always the longest chord in a circle?

T

A tangent is a point?

F

A secant can pass through the radius?

F

A circle can have a tangent that forms an acute angle with the radius?

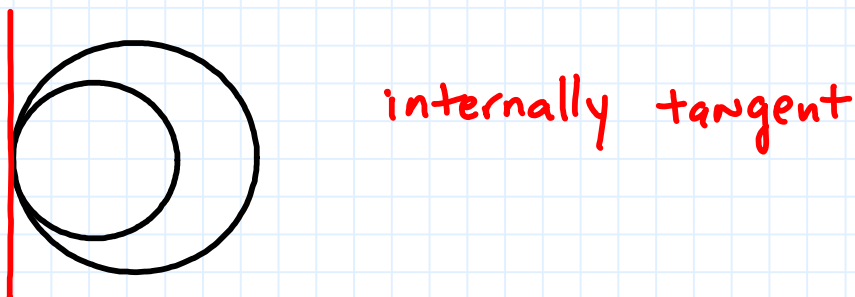
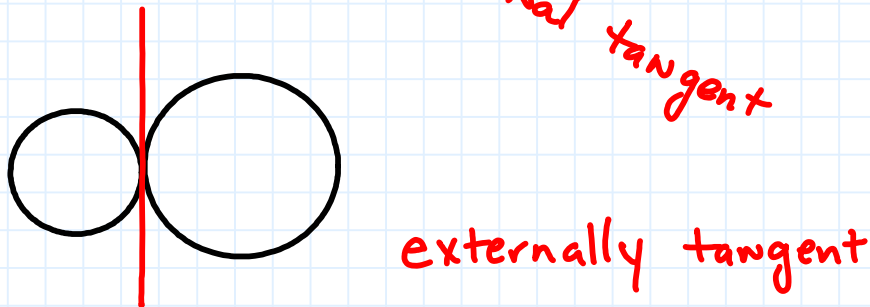
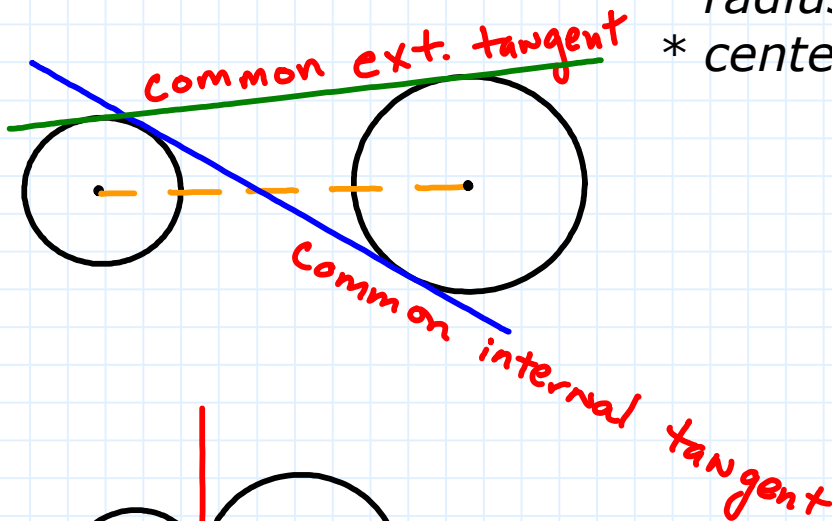
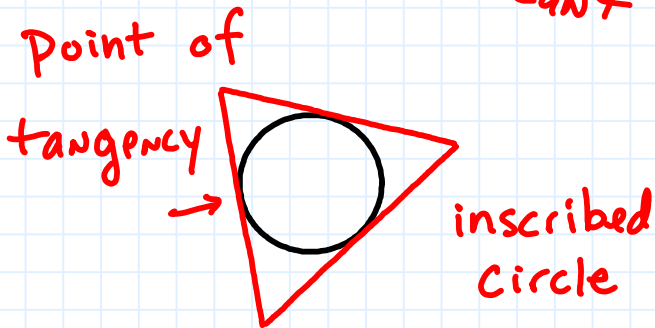
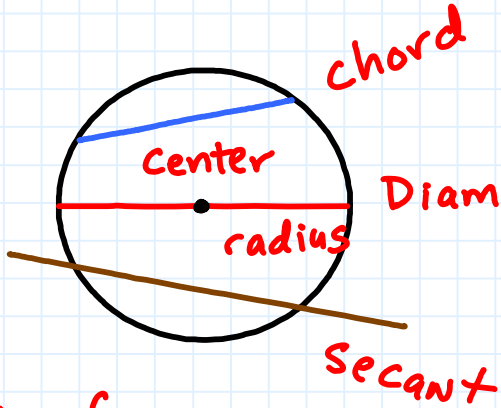
F

A circle can be defined as the set of all points equidistant from a point?

T



Example Set: B



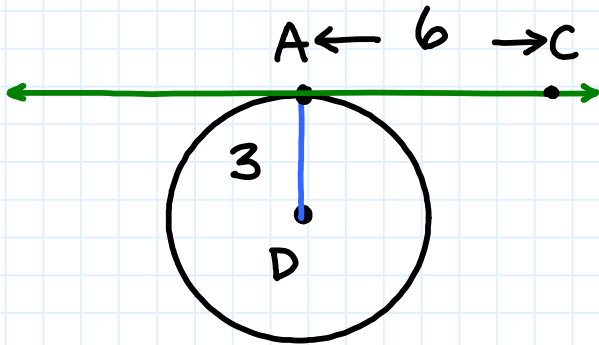
Label the parts of each pictures with the following terms:

- * secant
- * externally tangent
- * point of tangency
- * common external tangent
- * inscribed circles
- * diameter
- * chord
- * common internal tangent
- * internally tangent
- * radius
- * center



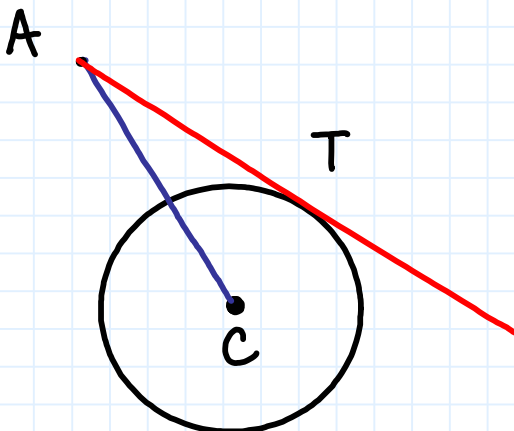
Example Set: C

The line is tangent to the circle at point A. Find the distance of DC.



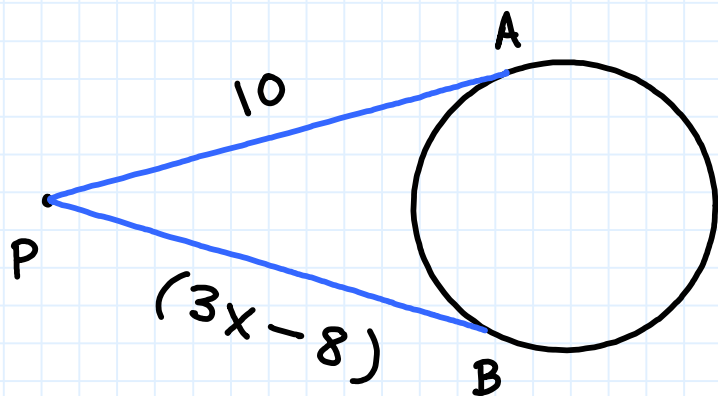
$$DC = 3\sqrt{5}$$

AT is tangent to circle C at point T. Find the diameter of the circle given $AT=7$ and $AC=12$.



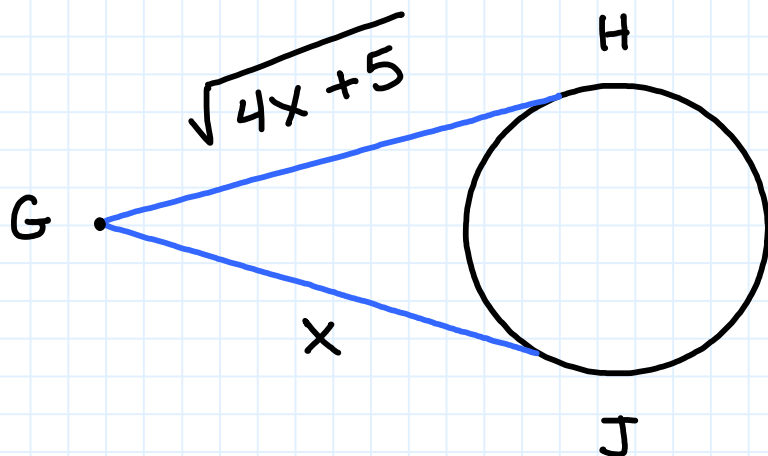
$$\text{Diam} = 2\sqrt{95}$$

Find the value of x given both lines are tangents to the circle from P .



$$x = 6$$

Find the value of x given both lines are tangents to the circle from G .



$$x = 5$$