

Practice 11.1

Determine if line AB is tangent to the circle.

1)   
 $a^2 + b^2 = c^2$   
 $8.4^2 + 11.2^2 = 14^2$   
 $70.56 + 125.44 = 196$   
 $196 = 196$   
**yes! TANGENT**

2)   
 $12.3^2 + 11.4^2 = 15.4^2$   
 $151.29 + 129.96 = 238.25$   
 $381.25 \neq 238.25$   
**NOT tangent!**

Find the segment length indicated. Assume that lines which appear to be tangent are tangent.

3)   
 $12^2 + x^2 = 15^2$   
 $144 + x^2 = 225$   
 $x^2 = 81$   
 $x = 9$

4)   
 $3^2 + 4^2 = x^2$   
 $25 = x^2$   
 $5 = x$   
 $5 - 3 = 2$

5)   
 $x^2 + 7.8^2 = 17.8^2$   
 $x^2 = 256$   
 $x = 16$   
 $16 \div 2 = 8$

6)   
 $7.8^2 + 10.4^2 = x^2$   
 $169 = x^2$   
 $13 = x$

Find the perimeter of each polygon. Assume that lines which appear to be tangent are tangent.

7)   
**P = 48**

8)   
**P = 68**

9)   
**P = 87**

10)   
**P = 47.4**

Find the angle measure indicated. Assume that lines which appear to be tangent are tangent.

11)   
 $90 + 112 + x = 180$   
 $172 + x = 180$   
 $x = 8$

12)   
 $x + 90 + 103 + 90 = 360$   
 $x = 77$

13)   
 isosceles } Base angles  $\cong$   
 $x + 59 + x = 180$   
 $2x + 59 = 180$   
 $2x = 121$   
 $x = 60.5$   
**X = 31**

14)   
**X = 30**

15)   
 $11x - 3 = 10x$   
 $-10x -10x$   
 $x - 3 = 0$   
**X = 3**

16)   
 $2x + 48 = x + 48$   
**X = 0**

17)   
 $x^2 - 2x = 15$   
 $-15 -15$   
 $x^2 - 2x - 15 = 0$   
 $(x-5)(x+3) = 0$   
**X = 5 or X = -3**  
 check both!!