Using the Pythagorean Theorem to find the value of $x$ in each of the diagrams below:

1. 

2. 

Converse of the Pythagorean Theorem. Which of the following are right triangles?

3.  

4.  

5.  

6.  

7.  

8.  

9.  

10.  

11.  

12.  

13.  

14.  

15.  

16.  

Determine if $AB$ is tangent to the circle centered at point $C$. Explain your reasoning.
$\overline{AB}$ and $\overline{AD}$ are tangent to the circle centered at point C. Find the value of $x$.

18. $5x + 8 = 8x - 4$

19. $x = \underline{\hspace{2cm}}$

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Given the center of the circle is point A, find the requested measure.

20. $mEF = \underline{\hspace{2cm}}$

21. $mCE = \underline{\hspace{2cm}}$

22. $mCDF = \underline{\hspace{2cm}}$

23. $mDE = \underline{\hspace{2cm}}$

24. $mBC = \underline{\hspace{2cm}}$

25. $mFB = \underline{\hspace{2cm}}$

26. $mFBE = \underline{\hspace{2cm}}$

27. $mDFC = \underline{\hspace{2cm}}$

28. $mDFB = \underline{\hspace{2cm}}$

29. $mBEC = \underline{\hspace{2cm}}$

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Determine the measure of $BC$.

30. $BEC = \underline{\hspace{2cm}}$

31. $BC = \underline{\hspace{2cm}}$

32. $BC = \underline{\hspace{2cm}}$

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Find the requested measure for each circle.

33. $FC = \underline{\hspace{2cm}}$

34. $mBG = \underline{\hspace{2cm}}$

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