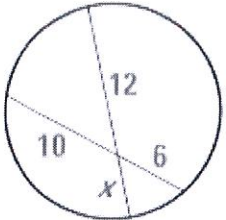
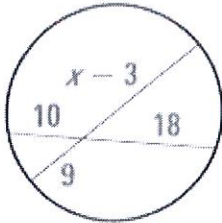


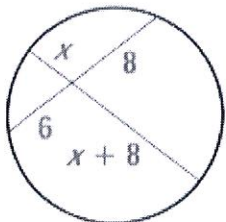
Geometry
Homework – Special Segment Lengths in a Circle

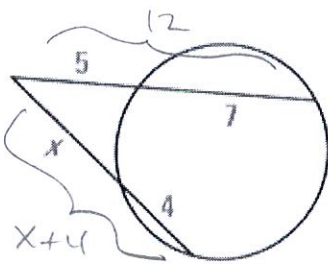
Name: Key Date: _____

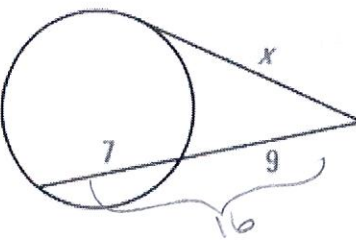
Find the value of x.

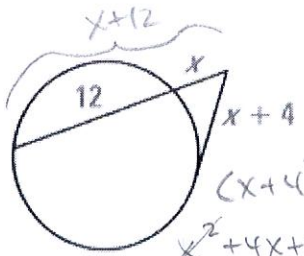
1.  $12x = 6(10)$
 $12x = 60$
 $x = 5$

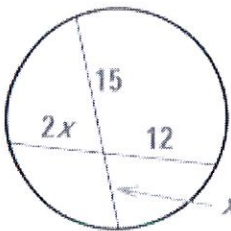
2.  $9(x-3) = 10(18)$
 $9x - 27 = 180$
 $9x = 207$
 $x = 23$

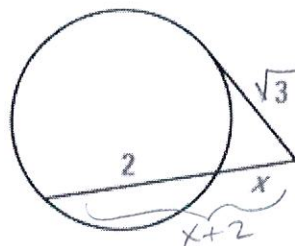
3.  $6(8) = x(x+8)$
 $48 = x^2 + 8x$
 $0 = x^2 + 8x - 48$
 $0 = (x+12)(x-4)$
 $x = -12, 4$
 $x = 4$

4.  $5(12) = x(x+4)$
 $60 = x^2 + 4x$
 $0 = x^2 + 4x - 60$
 $0 = (x+10)(x-6)$
 $x = -10, 6$
 $x = 6$

5.  $x^2 = 9(16)$
 $\sqrt{x^2} = \sqrt{144}$
 $x = 12$

6.  $(x+4)^2 = x(x+12)$
 $x^2 + 4x + 4x + 16 = x^2 + 12x$
 $8x + 16 = 12x$
 $16 = 4x$
 $x = 4$

7.  $2x(12) = 15(x+3)$
 $24x = 15x + 45$
 $9x = 45$
 $x = 5$

8.  $\sqrt{3}^2 = x(x+2)$
 $3 = x^2 + 2x$
 $0 = x^2 + 2x - 3$
 $0 = (x+3)(x-1)$
 $x = -3, 1$
 $x = 1$

9. Which of the following is a possible value of x?

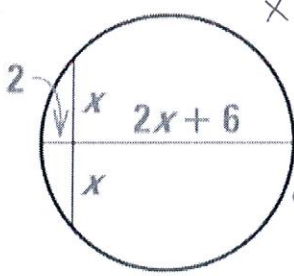
10. Find PQ.

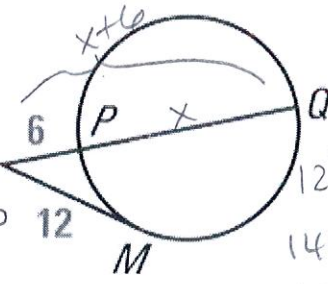
A. -2

B. 4

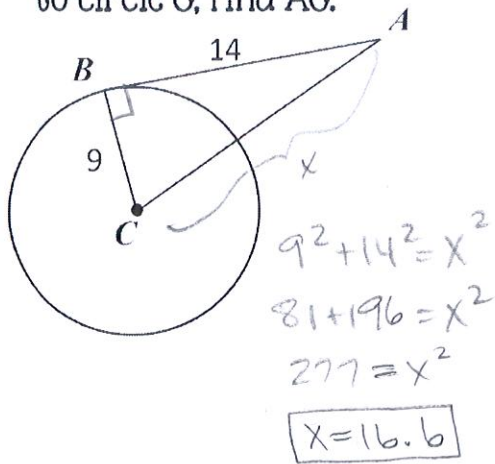
C. 5

D. 6

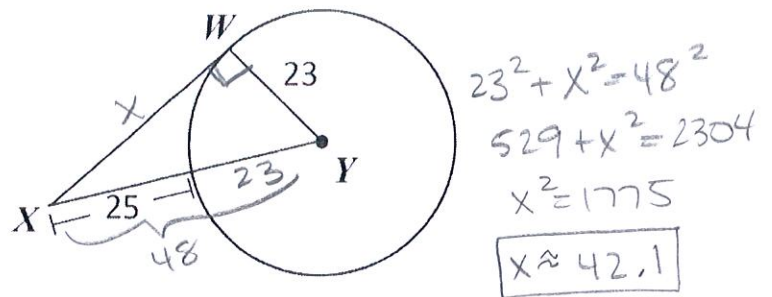
 $x \cdot x = 2(2x+6)$
 $x^2 = 4x + 12$
 $x^2 - 4x - 12 = 0$
 $(x-6)(x+2) = 0$
 $x = 6, -2$
 $x = 6$

 $12^2 = 6(x+6)$
 $144 = 6x + 36$
 $108 = 6x$
 $x = 18$

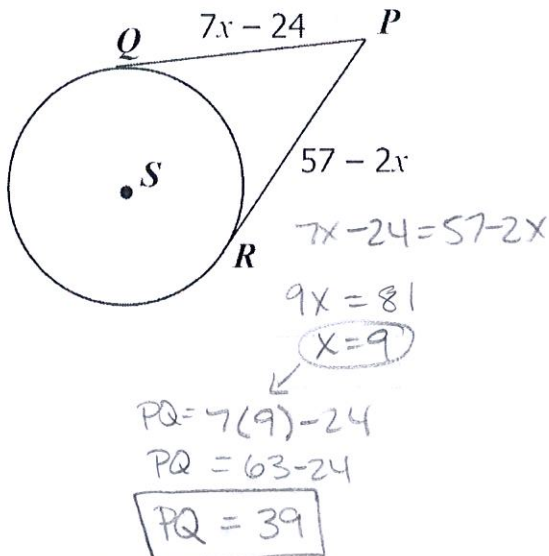
11. If \overline{AB} is tangent to circle C, find AC.



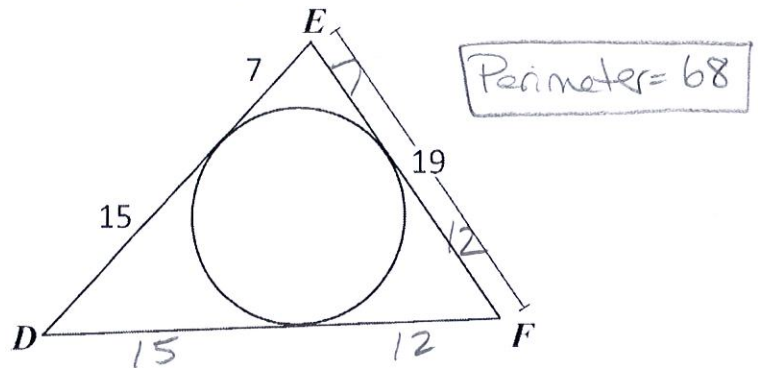
12. If \overline{WX} is tangent to circle Y, find WX.



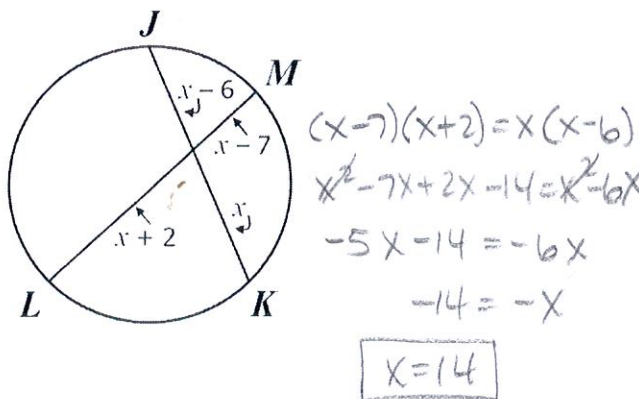
13. If \overline{PQ} and \overline{PR} are tangent to circle S, find PQ.



14. Find the perimeter of $\triangle DEF$.



15. Find the value of x.



16. Find the value of x.

