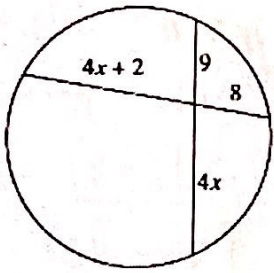


Day 8 – Segment Lengths (In and Out of a Circle) – Practice

1) Solve for x. **Two Chords**



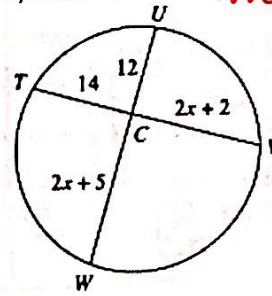
$$9(4x) = 8(4x+2)$$

$$36x = 32x + 16$$

$$4x = 16$$

$$\boxed{x = 4}$$

2) Find CW. **Two Chords**



$$12(2x+5) = 14(2x+2)$$

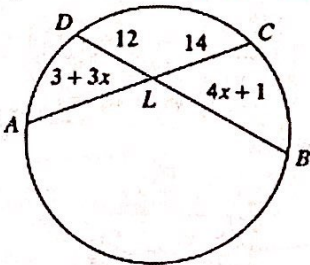
$$24x + 60 = 28x + 28$$

$$32 = 4x$$

$$\boxed{8 = x}$$

$$\boxed{CW = 21}$$

3) Find BD. **Two Chords**



$$14(3+3x) = 12(4x+1)$$

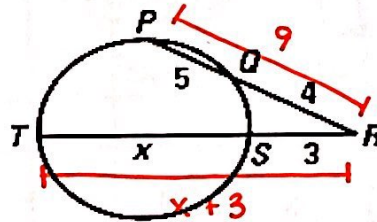
$$42 + 42x = 48x + 12$$

$$30 = 6x$$

$$\boxed{x = 5}$$

$$\boxed{BD = 33}$$

4) Solve for x. **Two Secants**



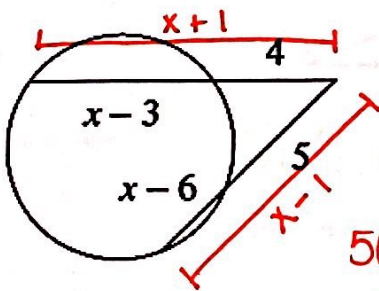
$$3(x+3) = 4(9)$$

$$3x + 9 = 36$$

$$3x = 27$$

$$\boxed{x = 9}$$

5) Solve for x. **Two Secants**

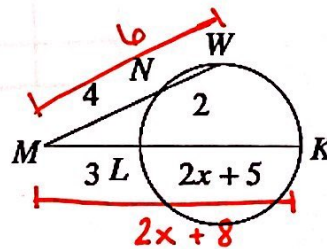


$$5(x-1) = 4(x+1)$$

$$5x - 5 = 4x + 4$$

$$\boxed{x = 9}$$

6) Find LK. **Two Secants**



$$3(2x+5) = 4(6)$$

$$6x + 15 = 24$$

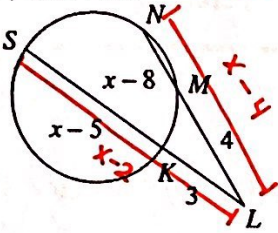
$$6x = 9$$

$$\boxed{x = 1.5}$$

$$\boxed{LK = 5}$$

7) Find NM.

Two Secants



$$4(x-4) = 3(x-2)$$

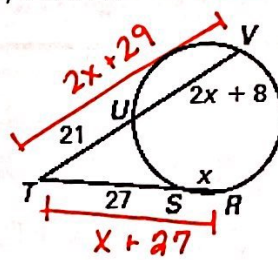
$$4x - 16 = 3x - 6$$

$$x = 10$$

$$NM = 2$$

8) Find TV.

Two Secants



$$27(x+27) = 21(2x+29)$$

$$27x + 729 = 42x + 609$$

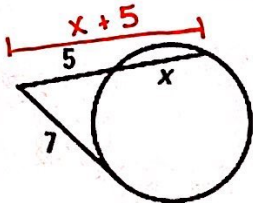
$$120 = 15x$$

$$x = 8$$

$$TV = 45$$

9) Solve for x.

Tangent / Secant



$$(7)^2 = 5(x+5)$$

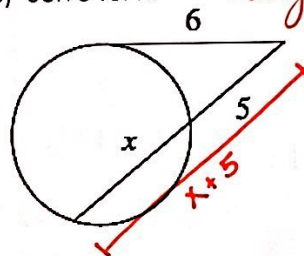
$$49 = 5x + 25$$

$$24 = 5x$$

$$x = 4.8$$

10) Solve for x.

Tangent / Secant



$$(6)^2 = 5(x+5)$$

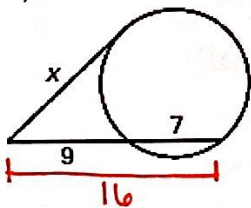
$$36 = 5x + 25$$

$$11 = 5x$$

$$x = 2.2$$

11) Solve for x.

Tangent / Secant



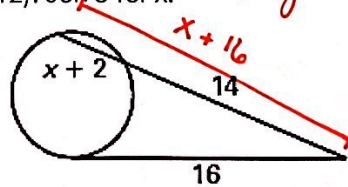
$$x^2 = 9(16)$$

$$x^2 = 144$$

$$x = 12 \text{ and } x = -12$$

12) Solve for x.

Tangent / Secant



$$(16)^2 = 14(x+16)$$

$$256 = 14x + 224$$

$$32 = 14x$$

$$x \approx 2.9$$