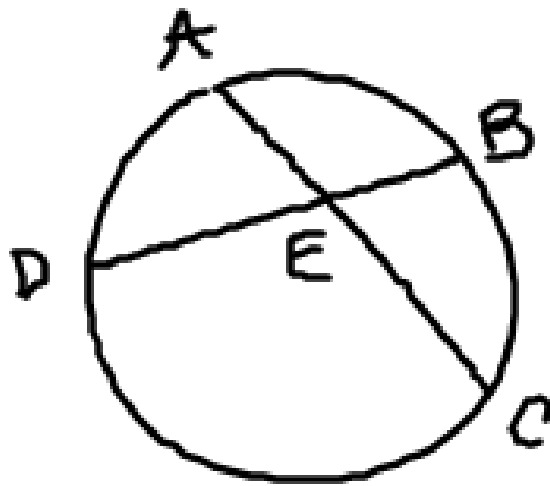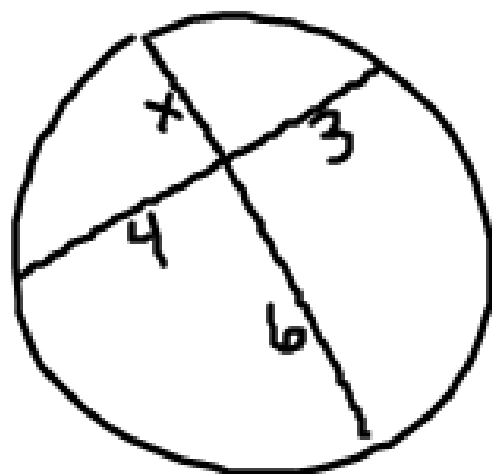# 10 - 7
Special Segments
in a Circle

Theorem 10.15

$$AE \cdot EC = DE \cdot EB$$

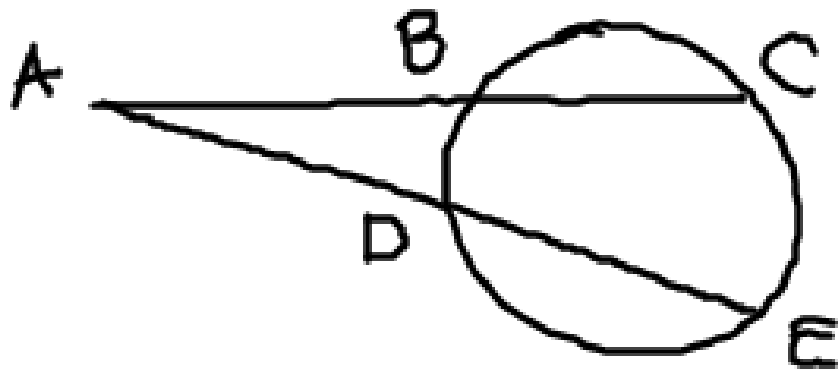Ex: Find x.

$$6x = 4 \cdot 3$$
$$6x = 12$$
$$\boxed{x = 2}$$
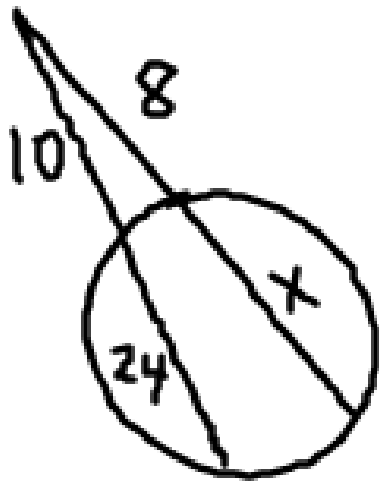
Theorem 10.16

$$AC \cdot AB = AE \cdot AD$$

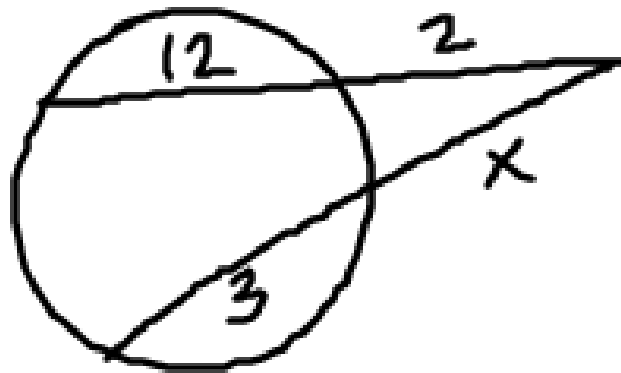EX: Find x.

$$34 \cdot 10 = (8+x) \cdot 8$$
$$340 = 64 + 8x$$
$$-64 \quad -64$$
$$\frac{276}{8} = \frac{8x}{8}$$
$$\boxed{34.5 = x}$$

Ex: Find x.

12

2

x

3

−4, 7

$14 \cdot 2 = (x+3) \cdot x$

$28 = x^2 + 3x$

$-28 \qquad\qquad -28$
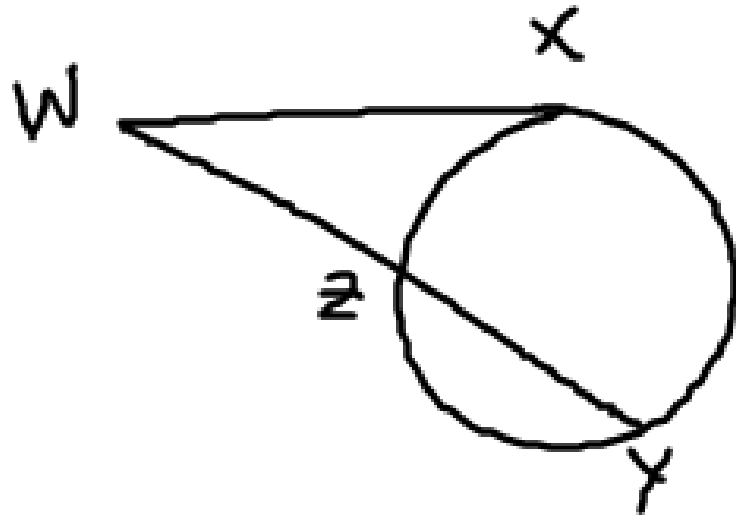
$0 = x^2 + 3x - 28$

$0 = (x-4)(x+7)$

$x = 4 \qquad x = -7$

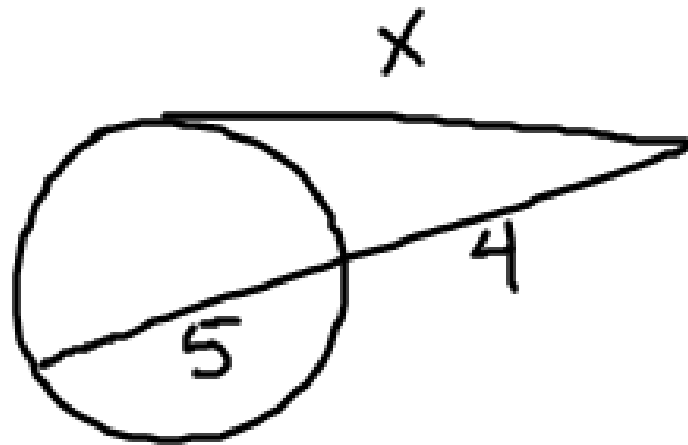# Theorem 10.17

$$WY \cdot WZ = WX^2$$

EX: Find x.

$$9 \cdot 4 = x^2$$
$$\sqrt{36} = \sqrt{x^2}$$
$$\boxed{6 = x}$$

Homework:

10 - 7 WS