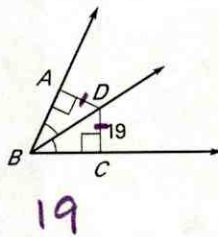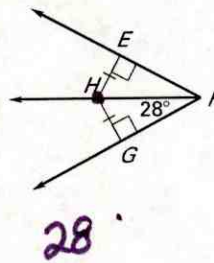**LESSON 5.3**

Practice

For use with pages 310–316

Use the information in the diagram to find the measure.
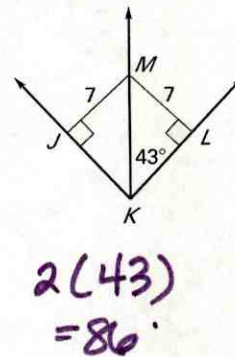
1. Find *AD*.

19

2. Find $m\angle EFH$.
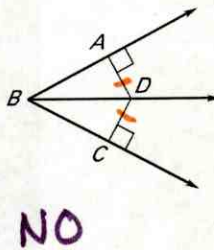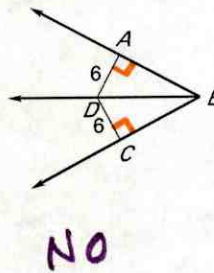

28°

28

3. Find $m\angle JKL$.

2(43)
=86

Can you conclude that $\overrightarrow{BD}$ bisects $\angle ABC$? Explain.

4.

NO

5.

NO

6.

yes

Find the value of *x*.

7.

$(5x - 2)°$

$(4x + 5)°$

$5X - 2 = 4X + 5$

$X = 7$

8.

$4x + 3$

$8x - 9$

$4X + 3 = 8X - 9$

$-4X = -12$

$X = 3$

9.

$6x - 17$

$3x + 7$

$6X - 17 = 3X + 7$

$3X = 24$

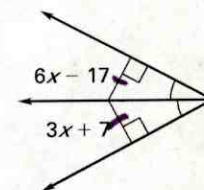$X = 8$
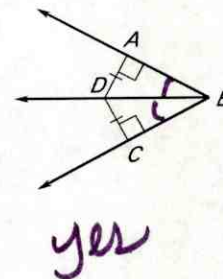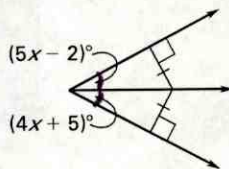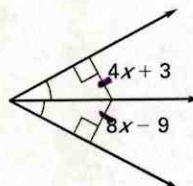
LESSON
5.3

Practice *continued*
For use with pages 310–316

Can you find the value of *x*? Explain.

10.

x
9

$X = 9$

∠ Bisector Thm

11.

34°
x°

NO,
need to be ⊥

12.

x°
41°
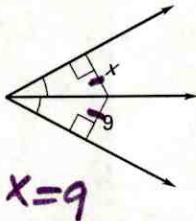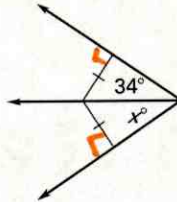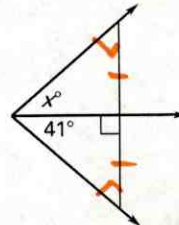
NO,
segments are not ≅

incenter to side of Δ (⊥) are ≅

Find the indicated measure.

13. Point *G* is the incenter of △*ACE*.
Find *BG*.

C
B   D
34   G
16
A   F   E
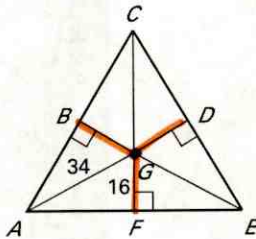
16

14. Point *P* is the incenter of △*HKM*.
Find *JP*.

K
J   L
P   25
H   N   24   M

JP = 7

P
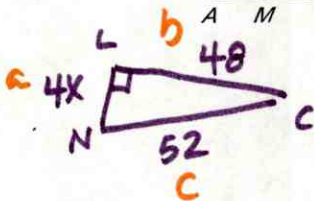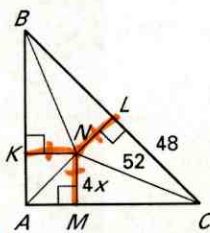X   25   c
N   24   m
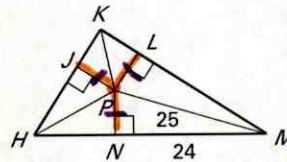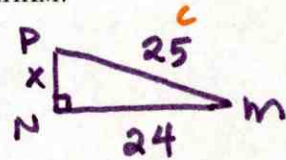
$c^2 = a^2 + b^2$
$25^2 = x^2 + 24^2$
$625 = x^2 + 576$
$\sqrt{49} = \sqrt{x^2}$
$x = 7$

Find the value of *x* that makes *N* the incenter of the triangle.

15.

B
L
K   N   48
52
A   M   4x   C

a   4x   L   b   48
N   52   C   c
c

$52^2 = 48^2 + (4x)^2$
$2704 = 2304 + 16x^2$
$\dfrac{400}{16} = \dfrac{16x^2}{16}$
$25 = x^2$
$\boxed{x = 5}$

16.

E
K   3x   L
3x   N   51   45
D   M   F

3x   L
N   51   45   F
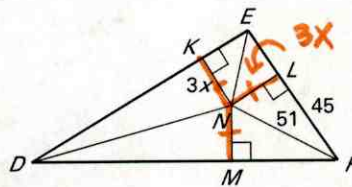
$51^2 = (3x)^2 + 45^2$
$2601 = 9x^2 + 2025$
$\dfrac{9x^2}{9} = \dfrac{576}{9}$
$x^2 = 64$
$\boxed{x = 8}$