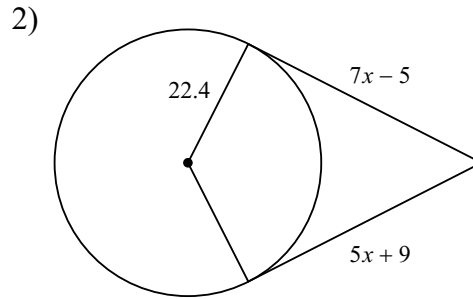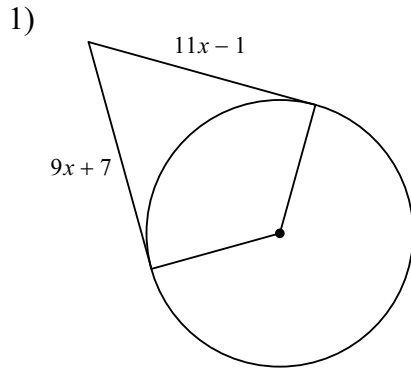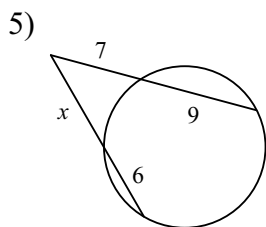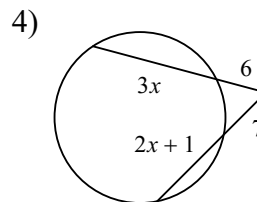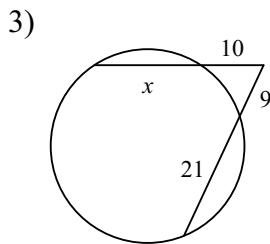Name_____

Lesson 11.5 ~ Extra Note Sheet

The Tangent Segment Theorem states: "If two segments are drawn from the same point on the exterior of a circle, then the tangent segments are congruent."

Use the Tangent Segment Theorem to set up and solve and equation to find the value of x. Assume that lines which appear to be tangent are tangent.

1)
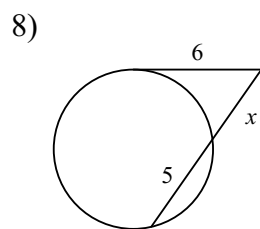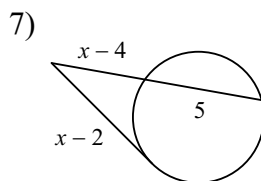
$11x - 1$

$9x + 7$

2)

22.4

$7x - 5$

$5x + 9$

The Secant Segment Theorem states: "If two secant segments intersect in the exterior of a circle, then the product of the lengths of one secant segment and its external secant segment is equal to the product of the lengths of the second secant segment and its external secant segment."

Use the Secant Segment Theorem to set up and solve an equation to find the value of x.

3)

10

x

9

21

4)

$3x$

6

$2x + 1$

7

5)

7

x

9

6

The Secant Tangent Theorem states: "If a tangent and a secant segment intersect in the exterior of a circle, then the product of the lengths of the secant segment and its external secant segment is equal to the square of the length of the tangent segment."

Use the Secant Tangent Theorem to set up and solve an equation to find the value of *x*. Assume that lines which appear tangent are tangent.

6)

7)

8)

Name_____

Lesson 11.5 ~ Extra Note Sheet

The Tangent Segment Theorem states: "If two segments are drawn from the same point on the exterior of a circle, then the tangent segments are congruent."

Use the Tangent Segment Theorem to set up and solve and equation to find the value of *x*. Assume that lines which appear to be tangent are tangent.
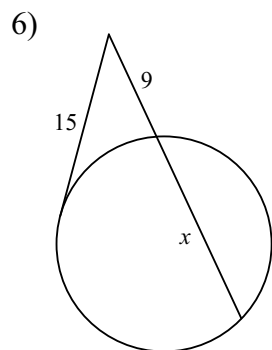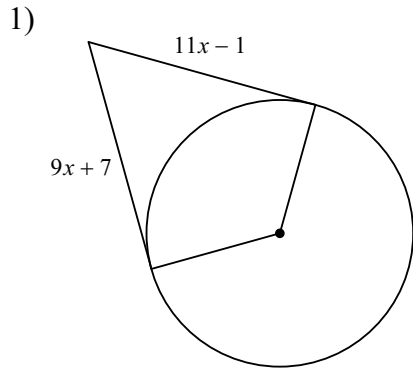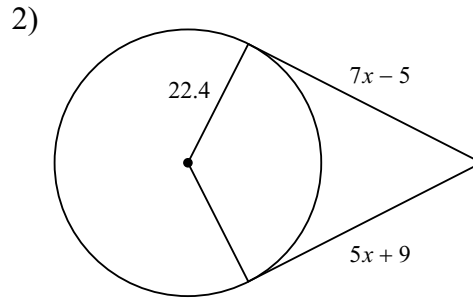
1)

$11x - 1$
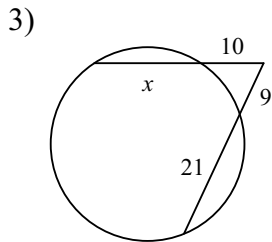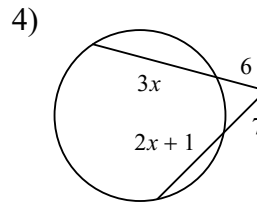
$9x + 7$

4

2)

22.4

$7x - 5$

$5x + 9$

7

The Secant Segment Theorem states: "If two secant segments intersect in the exterior of a circle, then the product of the lengths of one secant segment and its external secant segment is equal to the product of the lengths of the second secant segment and its external secant segment."
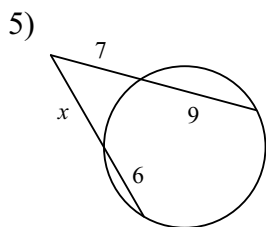
Use the Secant Segment Theorem to set up and solve an equation to find the value of *x*.

3)

10

x

9

21

17

4)

$3x$

6

$2x + 1$

7

5

5)

7

x

9

6

8

The Secant Tangent Theorem states: "If a tangent and a secant segment intersect in the exterior of a circle, then the product of the lengths of the secant segment and its external secant segment is equal to the square of the length of the tangent segment."

Use the Secant Tangent Theorem to set up and solve an equation to find the value of *x*. Assume that lines which appear tangent are tangent.

6)

9

15

x

16

7)

$x - 4$

5

$x - 2$

8

8)

6

x

5

4