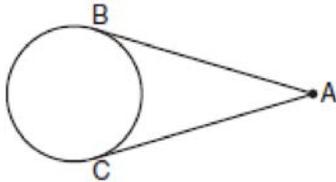


**G.C.A.2: Chords, Secants and Tangents 14**

- 1 In circle  $O$ ,  $\overline{PA}$  and  $\overline{PB}$  are tangent to the circle from point  $P$ . If the ratio of the measure of major arc  $AB$  to the measure of minor arc  $AB$  is 5:1, then  $m\angle P$  is
- 1) 60
  - 2) 90
  - 3) 120
  - 4) 180

- 2 The accompanying diagram shows two lengths of wire attached to a wheel, so that  $\overline{AB}$  and  $\overline{AC}$  are tangent to the wheel. If the major arc  $\widehat{BC}$  has a measure of  $220^\circ$ , find the number of degrees in  $m\angle A$ .



- 3 Two tangents  $\overline{PA}$  and  $\overline{PB}$  are drawn to circle  $O$  from an external point  $P$ . If the measure of major arc  $\widehat{AB}$  is  $250^\circ$ , find the measure of  $\angle P$ .

- 4 Two tangents to a circle from an external point intercept a major arc of  $300^\circ$ . Find the number of degrees in the angle formed by the two tangents.

- 5 In a circle, two tangents from an external point intercept a major arc of  $240^\circ$ . Find the number of degrees in the angle formed by the tangents.

- 6 Two tangents are drawn to circle  $O$  from external point  $P$ . If the major arc formed has a measure of  $280^\circ$ , find  $m\angle P$ .

- 7 Tangents  $\overline{PA}$  and  $\overline{PB}$  are drawn from point  $P$  to the same circle. The major arc intercepted by the tangents is three times the minor arc. Find  $m\angle APB$ .

- 8 Two tangents are drawn to a circle from an external point. If the measure of the major arc is  $260^\circ$ , what is the measure, in degrees, of the angle formed by the two tangents?

- 9 Two tangents are drawn to a circle from external point  $P$ . If the minor arc has a measure of  $100^\circ$ , find  $m\angle P$ .

**G.C.A.2: Chords, Secants and Tangents 14**  
**Answer Section**

1 ANS: 3 REF: 060025siii

2 ANS:

40. If major arc  $\widehat{BC}$  has a measure of  $220^\circ$ , then minor arc  $\widehat{BC}$  has a measure of  $140^\circ$ .  $\frac{220-140}{2} = 40$ 

REF: 060924b

3 ANS:

70°

REF: 068113siii

4 ANS:

120

REF: 068612siii

5 ANS:

60

REF: 019609siii

6 ANS:

100

REF: 089711siii

7 ANS:

90

REF: 069011siii

8 ANS:

80

REF: 010309siii

9 ANS:

80

REF: 080313siii