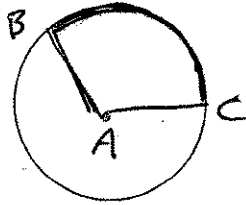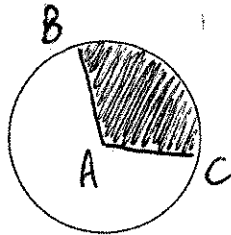1. In the figure below, BC is the arc of a circle with center A. If the radius of the circle is 12 and the length of arc BC is 8π, what is the measure of angle BAC?
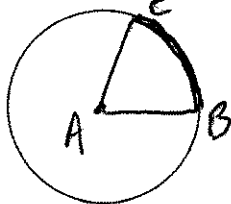   (A) 100°
   (B) 120°
   (C) 135°
   (D) 145°
   (E) 160°

2. In the figure below, if the radius of the circle is 10 and the area of the shaded sector is 30π, what is the measure of angle BAC?
   A. 90°
   B. 100°
   C. 108°
   D. 116°
   E. 126°
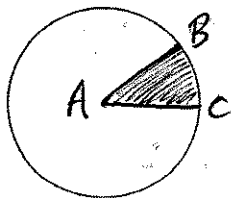
3. In the figure below, BC is the arc of a circle with center A. If the diameter of the circle is 18 and the length of arc BC is 4π, what is the measure of angle BAC?
   (A) 70°
   (B) 75°
   (C) 80°
   (D) 85°
   (E) 90°

4. In the figure below, if the radius of the circle is 12 and the area of the shaded sector is 12π, what is the measure of angle BAC?
   A. 40°
   B. 36°
   C. 35°
   D. 30°
   E. 25°

Answers:

1. B
2. C
3. C
4. D