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Group B
13/15

Candidate's Index Number

ABCE/ PRI/19/0068

Signature:

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH
INSTITUTE OF EDUCATION

COLLEGES OF EDUCATION
FOUR-YEAR BACHELOR OF EDUCATION (B. ED)
FIRST YEAR, SECOND SEMESTER QUIZ II, JULY 2019

JULY 1, 2019   GEOMETRY AND TRIGONOMETRY   8:00 AM – 8:30 AM

Answer ALL the questions.
(30 Marks)

For items 1 to 15, each stem is followed by four options lettered A to D. Read each item carefully and circle the letter that corresponds to the correct or best option.

1. Any straight line which divides a circle into parts and is terminated at each end by the circumference is known as _____.
   A. arc
   B. chord
   C. diameter
   D. segment

Use the figure below to answer questions 2 - 3.
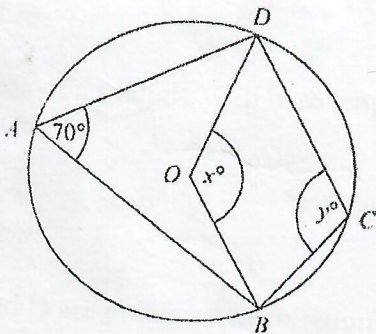
2. Find the value of the angle marked x.
   A. 35°
   B. 70°
   C. 140°
   D. 220°

3. Find the value of the sum of reflex $\angle BOD$ and $\angle BAD$.
   A. 140°
   B. 210°
   C. 290°
   D. 360°

P, Q and T are points on the circumference of a circle with centre, O. The line AB is a tangent to the circle at T, PQ = TQ, and $\angle ATP$ =58°
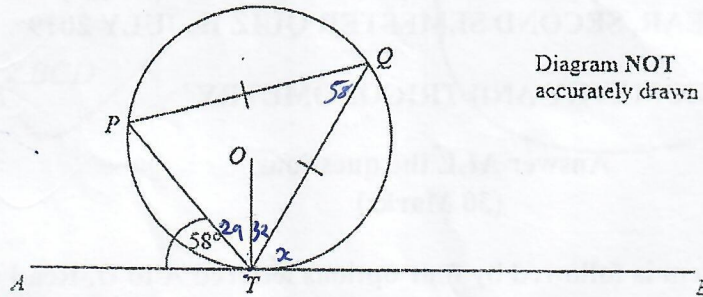

Diagram NOT accurately drawn

Use the information to answer questions 4 to 6.

4. Calculate $\angle OTQ$.
   A. 29°
   B. 32°
   C. 61°
   D. 90°

5. Calculate $\angle PTQ$.
   A. 32°
   B. 58°
   C. 61°
   D. 122°

6. Calculate $\angle PTB$.
   A. 32°
   B. 61°
   C. 90°
   D. 122°

7. In the diagram below, MOL is a diameter, $\angle LMN = y$ and $\angle MLK = (5y+6)^\circ$.
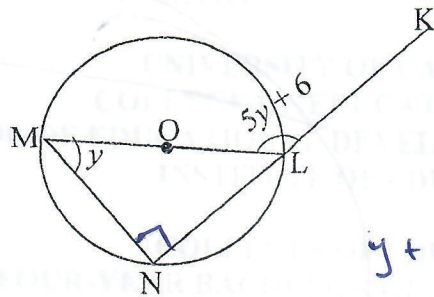
$y + 90 = 5y + 6$

$90 - 6 = 4y$

$84 = 4y$

Find the value of y.
- A. 14
- B. 16
- C. 20
- D. 21 ✓

8. Which of the following is **not** a Pythagorean triple?
- A. (6, 8, 10)
- B. (9, 12, 15)
- C. (10, 11, 12) ✓
- D. (12, 16, 20)

9. A square fence of length 10 cm is transformed into a rectangular fence with length 8 cm. Find the breadth of the rectangular shape.
- A. 10 cm
- B. 12 cm ✓
- C. 38 cm
- D. 40 cm

$\frac{1}{2} \wedge b \times h$

$156 = \frac{1}{2} \times 12 \times h$

10. The area of a triangle with base length of 12 cm is 156 cm². Find its height.
- A. 26 *cm* ✓
- B. 34 *cm*
- C. 51 *cm*
- D. 62 *cm*

A, B, C and D are points on the circumference of a circle with AC as diameter. $\angle ABD = 54^\circ$ and $\angle BAC = 28^\circ$.
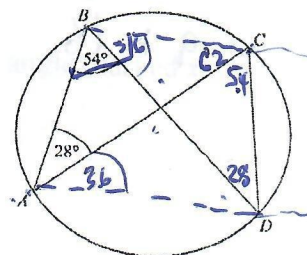

Diagram NOT accurately drawn

90

36

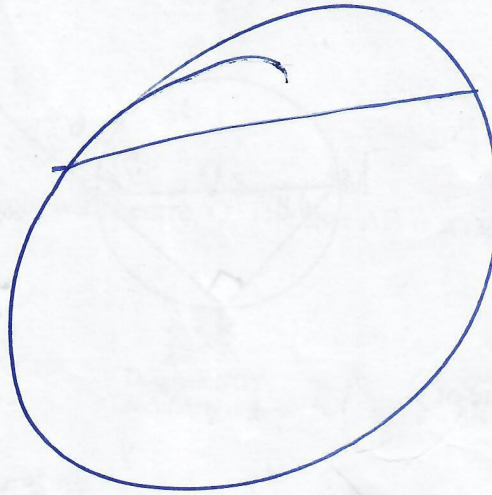Use the information to answer questions 11 to 13.

11. Calculate $\angle ACD$.
    A. 28°
    B. 54°
    C. 64°
    D. 116°

12. Calculate $\angle BAD$.
    A. 28°
    B. 36°
    C. 54°
    D. 64°

13. Calculate $\angle BCD$.
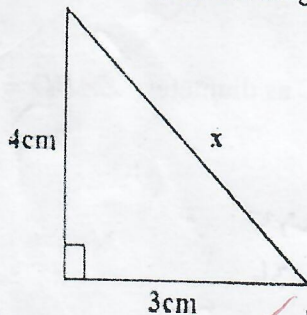   A. 116°
    B. 64°
    C. 54°
    D. 36°

14. In the diagram below, PQR is right angled triangle.
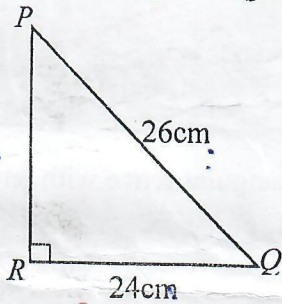
Calculate the perimeter of the triangle.
    A. 50 cm
    B. 58 cm
    C. 60 cm
    D. 120 cm

15. Find the value of x in the diagram below.

$$x^2 = 3^2 + 4^2$$
$$9 + 16 = 25$$

    A. 10 cm
    B. 7 cm
    C. 5 cm
    D. 3 cm