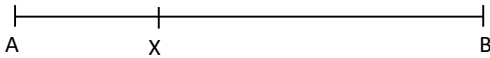


MID-TERM EXAMINATION - OCTOBER, 2022

CLASS: **JHS 2**

SUBJECT: **MATHEMATICS**

NAME: _____ DATE: _____

1. 
X is a point on the line segment AB such that $|AB| = 10\text{cm}$ and $|AX| = 4\text{cm}$. Find the ratio $|AX| : |XB|$
- A) 5:3
B) 3:2
C) 5:4
D) 2:3

2. If $21:2x = 7:10$, find x.

- A) 3
B) $2\frac{1}{4}$
C) 15
D) 35

3. Kofi and Ama shared an amount of money in the ratio 3:2 respectively. If Kofi had ₵60,000.00, how much was shared?

- A) ₵36,000.00
B) ₵40,000.00
C) ₵90,000.00
D) ₵100,000.00

4. Ten students in Kwamekrom JSS took 9 days to weed the school compound. How long would 15 students take to weed the compound if they worked at the same rate?

- A) 5 days
B) 6 days
C) $13\frac{1}{2}$ days

- D) 14 days

5. 8 girls can weed a plot of land in 10 days. How many days will 5 girls take to weed the same plot of land, working at the same rate?

- A) 6 days
B) 8 days
C) 12 days
D) 16 days



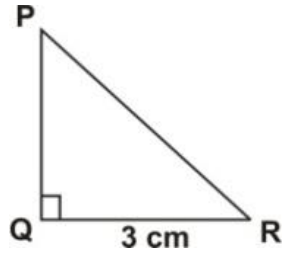
6. The figure above is made up of a rectangle and a triangle. The dimensions of the rectangle are 8cm and 6cm. The triangle has 6cm as its base and 3cm as its height.

Find the area of the figure.

- A) 33cm^2
B) 48cm^2
C) 51cm^2
D) 57cm^2

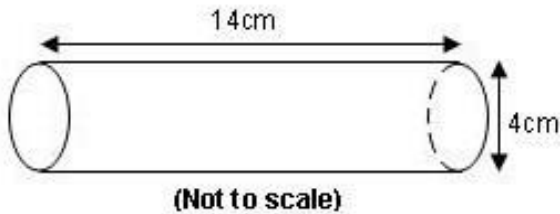
7. PQR is a right-angled triangle. The area of the triangle is 6cm^2 and $|QR| = 3\text{cm}$.

Find $|PQ|$.



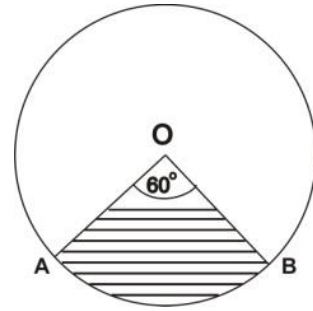
- A) 2cm
- B) 3cm
- C) 4cm
- D) 6cm

Use the information below to answer questions 8 to 9



In the diagram above, the cylinder has diameter 4cm and length 14cm. (Take $\pi = \frac{22}{7}$)

8. Find the circumference of the base.
- A) $\frac{44}{7}$ cm
 - B) $\frac{88}{7}$ cm
 - C) $\frac{176}{7}$ cm
 - D) 44 cm
9. The area of the base is
- A) 176cm^2
 - B) 44cm^2
 - C) $\frac{176}{7}\text{cm}^2$
 - D) $\frac{88}{7}\text{cm}^2$

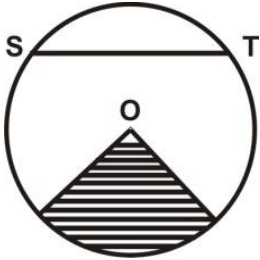


10. The area of circle, centre O, is 120cm^2 . Angle AOB is 60° . Find the area of sector AOB.
- A) 2cm^2
 - B) 3cm^2
 - C) 6cm^2
 - D) 20cm^2
11. A circle has radius 7cm; find its area. (Take $\pi = \frac{22}{7}$)
- A) 22cm^2
 - B) 44cm^2
 - C) 145cm^2
 - D) 154cm^2
12. Find the area of a circle whose diameter is 28 cm. (Take $\pi = \frac{22}{7}$)
- A) 44cm^2
 - B) 88cm^2
 - C) 352cm^2
 - D) 616cm^2
13. Find the circumference of a circle with radius 3.5 cm. (Take $\pi = \frac{22}{7}$)
- A) 11 cm
 - B) 22 cm
 - C) 35 cm

D) 38.5 cm

The diagram below shows a circle with centre O , S and T are points on the circle.

Use it to answer questions **14** and **15**



14. What name is given to the shaded region ?

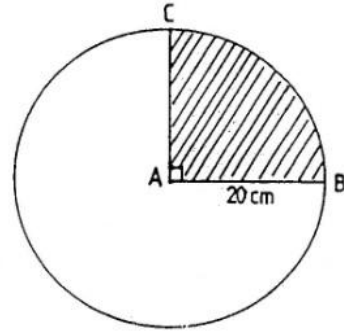
- A) Sector
- B) Segment
- C) Radii
- D) arc

15. The line ST is called

- A) an arc
- B) a chord
- C) a diameter
- D) a radius

16. A square of side 6cm has the same area as a rectangle of length 9cm. Find the breadth of the rectangle.

- A) 3cm
- B) 4cm
- C) 6cm
- D) 24cm



17. In the diagram above, A is the centre of the circle with radius 20cm. If angle BAC is 90° , find the perimeter of the shaded sector.

[Take $\pi = 3.14$]

- A) 31.4cm
- B) 31.8cm
- C) 40.0cm
- D) 51.4cm

18. A table which cost $\text{¢}2,400.00$ to manufacture was sold for $\text{¢}3,000.00$. Find the profit percent.

- A) 80%
- B) 25%
- C) 24%
- D) 20%

19. Find the simple interest on $\text{¢}28,000.00$ at $3\frac{1}{2}\%$ per annum for 6 months.

- A) $\text{¢}490.00$
- B) $\text{¢}560.00$
- C) $\text{¢}980.00$
- D) $\text{¢}4,000.00$

20. Kojo paid ₺270,000.00 for a TV set after he had been given a discount of 10%. Find the marked price.

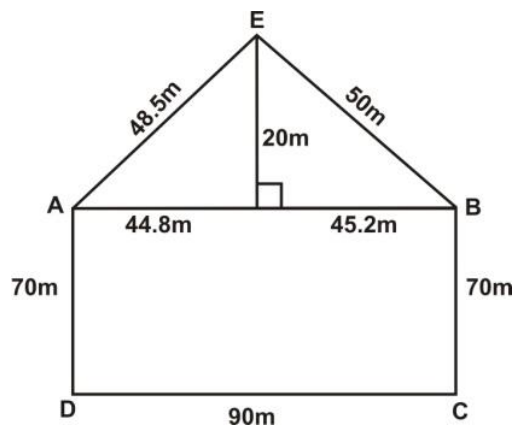
A) ₺300,000.00

B) ₺297,000.00

C) ₺280,000.00

D) ₺260,000.00

SECTION B



The diagram AEB CD shows the shape of Mr. Awuah's garden, which is made up of a rectangular portion ABCD and a triangular portion AEB.

$|AB| = |DC| = 90\text{m}$, $|AD| = |BC| = 70\text{m}$, $|AE| = 48.5\text{m}$ and $|EB| = 50\text{m}$. The height of the triangle is 20m.

- (a) Find the
- Area of ABCD
 - Area of AEB
 - Total area of the garden
 - Perimeter of the garden.

