Rosary School – Marj Elhamam
First Semester 2025/2026
Math Mid Term Exam

No. of Pages: (8)	No. of Questions: (8)	Mark: (/ 20)
Name: _____		Date: 20 /10 / 2025
Grade: 8 ( )		Duration: (50 minutes)

Instructions

- Use a pencil or a pen.
- You may use a calculator.

- Do **not** use an **erasable pen** or **correction fluid**.
- You must **show all your working out** with **your answer clearly identified**

at the **end of your solution.**

Information

• The total mark for this paper is **20**.

• The marks for **each** question are shown in brackets

Advice

• Read each question carefully before you start to answer it.

• Try to answer every question.

• Check your answers if you have time at the end.

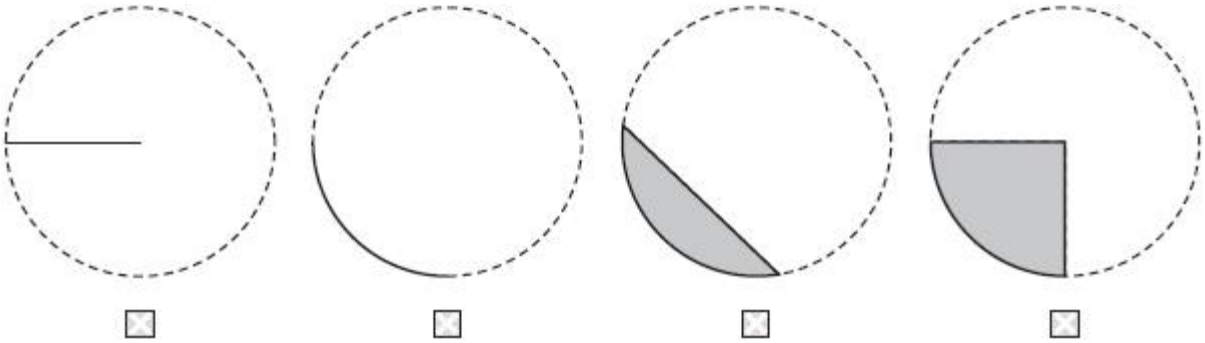
Q1: **(/ 3)**

Answer the question with a cross in the box you think is correct☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross☒.

a. What name is given to a straight line that connects two points on the circumference of a circle and pass through the centre of the circle?

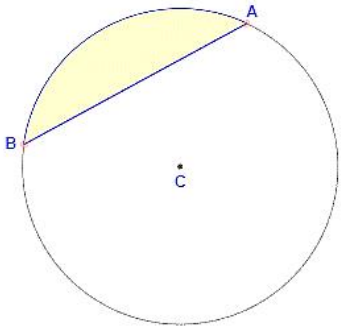
Chord	Diameter	Radius	Segment
☐	☐	☐	☐

b. On which of these diagrams is an arc illustrated?



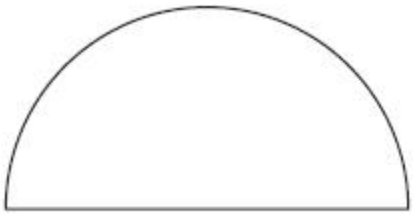
☐	☐	☐	☐

c. What word describes the shaded part of this circle?



Circumference	Radius	Sector	Segment
☐	☐	☐	☐
A	**B**	**C**	**D**

Q2: This diagram shows a semicircular disc. **(/ 2.5)**



14 cm

i. Calculate the area of the disc. **Round your answer to 1 decimal place.**

_____ cm^2

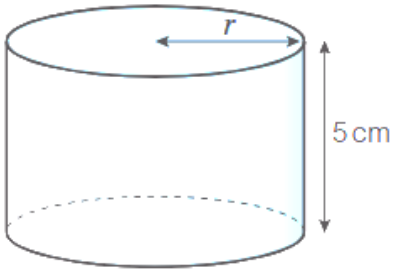
ii. Calculate the perimeter of the disc. **Round your answer to 2 decimal places.**

_____ cm

Q3: a. The capacity of this cylindrical glass is 320 cm^3. **(/ 3.5)**

Work out

i. the area of the circular end in this cylinder.



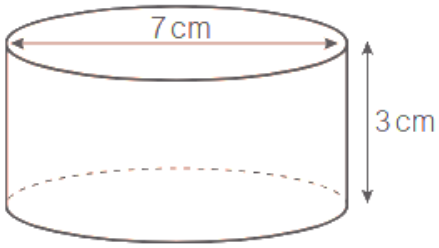
_____ cm^2

ii. the radius of the circular end.

Round your answer to 1 decimal place.

_____ cm

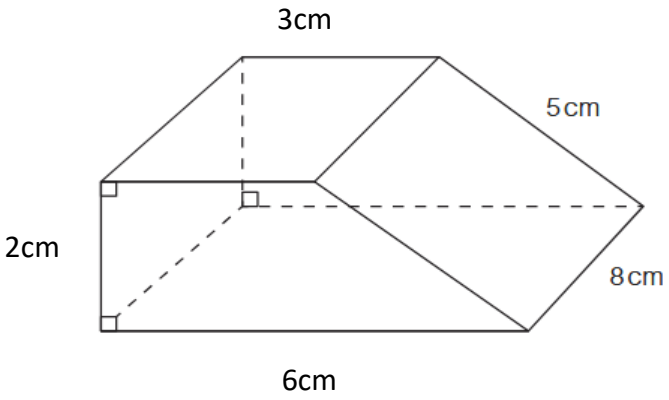
b. For this cylinder, work out the surface area. **Round your answer to 2 decimal places.**



_____ cm^2

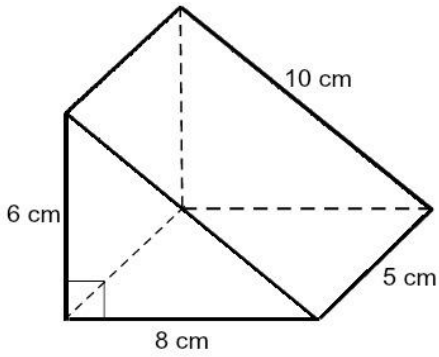
Q4: **(/ 2.5)**

a. Work out the **volume** of this prism:



_____ cm^3

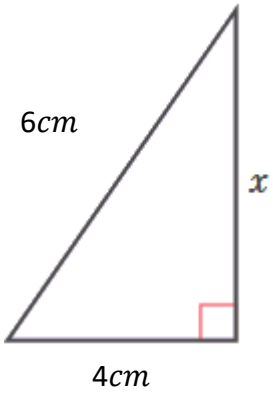
b. For this prism, work out the **surface area**.



_____ cm^2

(/ 2)

Q5: a. Work out the **length** of the missing side ($\boldsymbol{x}$).

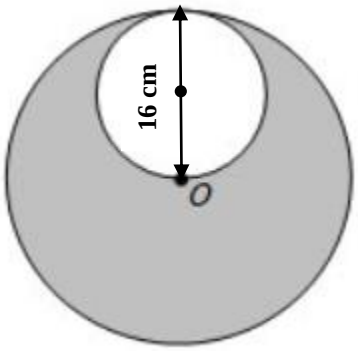


_____ cm

b. Work out the **area** of the triangle
Give your answer correct to 1 decimal place.

_____cm^2

Q6: Calculate the area of the shaded region. **(/ 1.5)**
Give your answer in **terms of π**.



_____cm^2

Q7: a) Work out the **first two** terms and the **10^{th}** term of the sequence.

(/ 4)

$T(n) = 6n^2 - 1$

_____

_____

_____

b) Work out the **nth** term of the following sequence.

5 , 9 , 13 , 17 , …

nth term = _____

c) Determine whether each sequence is arithmetic or not arithmetic
Explain your answer.

i) -3 , 1 , 5 , 9 ,… (Yes , No)

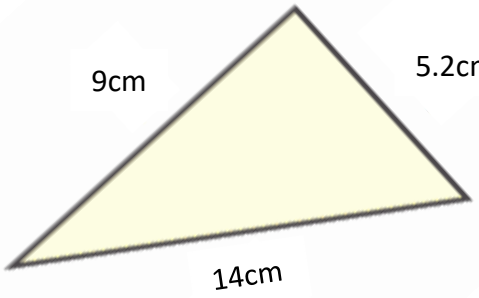
Explanation _____

ii) 1 , 4 , 9 , 16 ,… (Yes , No)

Explanation _____

(/1)

Q8: Is the following shape a right-angled triangle? **Explain your answer.**



☐ Yes ☐ No

Bonus: Work out the perimeter of this shape. Round your answer to one decimal place. (1 mark)

Teacher: Sally Serkisian