

2024– 2025  
S1 Second Term Uniform Test 2

# MATHEMATICS

28<sup>th</sup> May, 2025

Time Allowed: 30 minutes

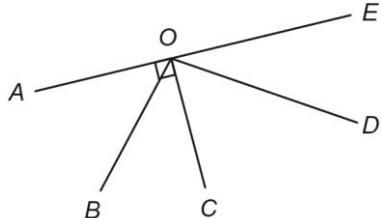
Total Marks: 21

## INSTRUCTIONS

1. Read carefully the instructions on the Answer Sheet. After the announcement of the start of the examination, you should insert the information required in the spaces provided.
2. When told to open this book, you should check that all the questions are there. Look for the words '**END OF PAPER**' after the last question.
3. All questions carry equal marks.
4. **ANSWER ALL QUESTIONS.** You should use an HB pencil to mark all your answers on the Answer Sheet, so that wrong marks can be completely erased with a clean rubber. You must mark the answers clearly; otherwise you will lose marks if the answers cannot be captured.
5. You should mark only **ONE** answer for each question. If you mark more than one answer, you will receive **NO MARKS** for that question.
6. No marks will be deducted for wrong answers.
7. The diagrams in this paper are not necessarily drawn to scale.
8. No calculator is allowed.

**Choose the best answer for each question.**

1. In the figure,  $AOE$  is a straight line.



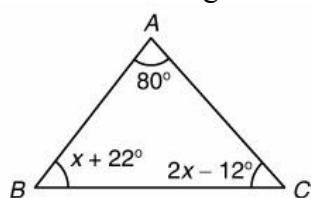
Which of the following must be an obtuse angle?

- A.  $\angle AOB$
- B.  $\angle AOD$
- C.  $\angle BOD$
- D.  $\angle COE$

2. Which of the following is a pair of supplementary angles?

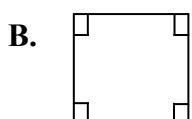
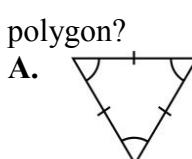
- A.  $145^\circ$  and  $215^\circ$
- B.  $15^\circ$  and  $75^\circ$
- C.  $125^\circ$  and  $145^\circ$
- D.  $45^\circ$  and  $135^\circ$

3. Find  $\angle ABC$  in the figure.



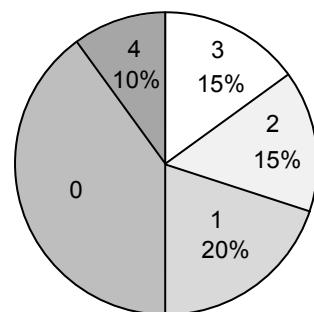
- A.  $30^\circ$
- B.  $48^\circ$
- C.  $52^\circ$
- D.  $60^\circ$

4. Which of the following must be a regular polygon?



5. The pie chart below shows the numbers of pets that 80 households have.

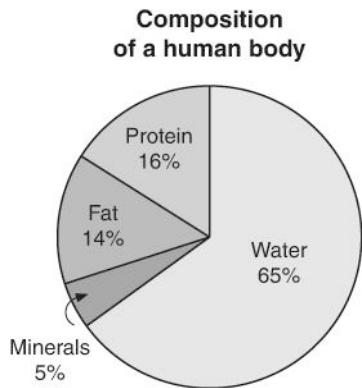
**Numbers of pets that 80 households have**



How many households do not have any pets?

- A. 16
- B. 24
- C. 32
- D. 36

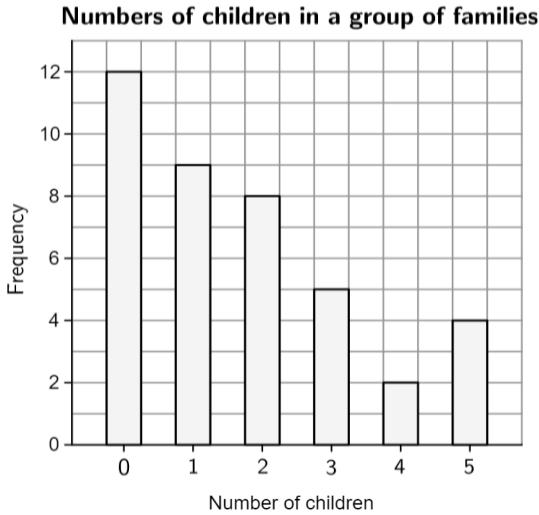
6. The pie chart below shows the composition of a human body.



If Paul's body contains 10.5 kg of fat, find the weight of protein in Paul's body.

- A. 10 kg
- B. 11 kg
- C. 12 kg
- D. 15 kg

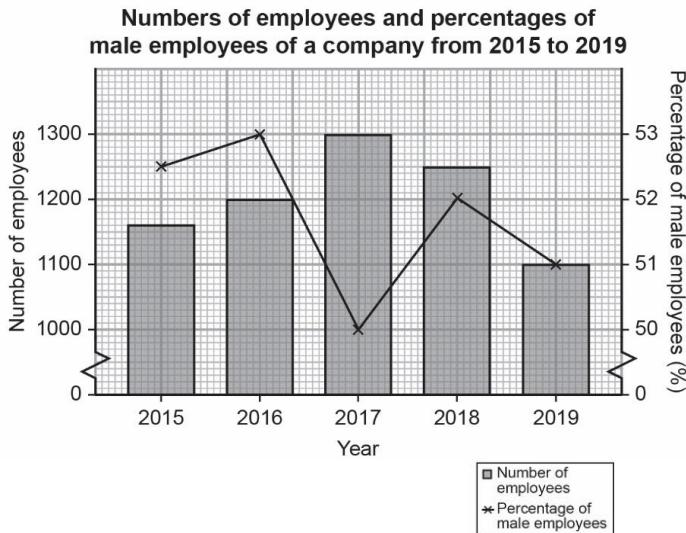
7. The bar chart below shows the numbers of children in a group of families.



Find the percentage of families with more than 2 children.

- A. 27.5%
- B. 47.5%
- C. 52.5%
- D. 72.5%

8. The chart below shows the numbers of employees and the percentages of male employees of a company from 2015 to 2019.



Which of the following must be true?

- I. The number of employees in 2019 was less than that in 2015 by 60.
- II. The number of male employees in 2017 was more than that in 2018.
- III. The number of male employees decreased when the corresponding percentage decreased.

- A. I only
- B. II only
- C. I and III only
- D. II and III only

9.  $4b^{12} \div (-16b^6) =$

A.  $-\frac{b^2}{4}$ .  
 B.  $-\frac{b^6}{4}$ .  
 C.  $-\frac{b^2}{12}$ .  
 D.  $-\frac{b^6}{12}$ .

10.  $\left(\frac{3v^9}{4}\right) \div \left(\frac{12v^5}{16}\right) =$

A.  $\frac{9}{16}v^{14}$ .  
 B.  $v^4$ .  
 C.  $\frac{1}{v^4}$ .  
 D.  $\frac{1}{v^{14}}$ .

11.  $(2x+x)(3y+2y+y) =$

A.  $36xy$ .  
 B.  $18xy$ .  
 C.  $9xy$ .  
 D.  $3x+6y$ .

12. The degree of the polynomial  $2a^2b+4abc-5a^2b^2c$  is

A. 5.  
 B. 4.  
 C. 3.  
 D. 2.

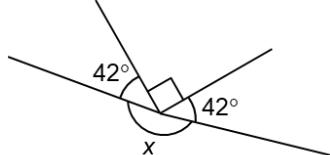
13. Simplify  $(7x^4 + 2 - 3x^2) - (1 - 2x^2 + 2x^3)$  and arrange the terms in ascending powers of  $x$ .

A.  $1 - x^2 - 2x^3 + 7x^4$   
 B.  $7x^4 - 2x^3 - x^2 + 1$   
 C.  $7x^4 + 2x^3 + x^2 + 3$   
 D.  $3 - 5x^2 + 2x^3 + 7x^4$

14.  $(3y^2 + 4y - 7) + 2(2y^2 - 5y - 1) =$

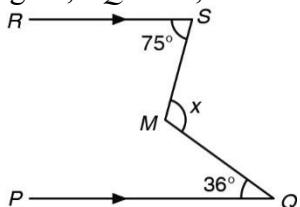
A.  $7y^2 - 6y - 5$ .  
 B.  $7y^2 - 6y - 9$ .  
 C.  $7y^2 + 14y - 5$ .  
 D.  $7y^2 + 14y - 9$ .

15. Find  $x$  in the figure.



A.  $178^\circ$ .  
 B.  $180^\circ$ .  
 C.  $182^\circ$ .  
 D.  $186^\circ$ .

16. In the figure,  $PQ \parallel RS$ , then  $x =$

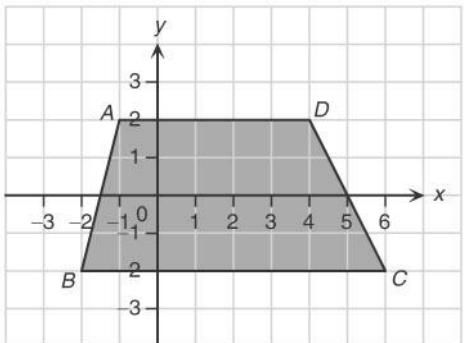


A.  $99^\circ$ .  
 B.  $102^\circ$ .  
 C.  $111^\circ$ .  
 D.  $114^\circ$ .

17. Which of the following points lies in quadrant III?

A.  $(4, 5)$   
 B.  $(4, -5)$   
 C.  $(-4, 5)$   
 D.  $(-5, -4)$

18. Find the area of trapezium  $ABCD$  in the figure.



A. 13 sq. units  
B. 24 sq. units  
C. 26 sq. units  
D. 29 sq. units

19. Given two points  $A(-3, 1)$  and  $B(-3, -4)$ , which of the following is/are true?  
I.  $AB = 3$  units  
II.  $AB$  is parallel to the  $y$ -axis.  
III.  $AB$  intersects the  $x$ -axis.  
A. I only  
B. II only  
C. I and III only  
D. II and III only

20.  $A(3, 6)$  is rotated clockwise about the origin through  $90^\circ$  to  $A'$ . Find the coordinates of  $A'$ .

A.  $(-6, -3)$   
B.  $(-6, 3)$   
C.  $(-3, -6)$   
D.  $(6, -3)$

21. A point  $Q$  is reflected about the  $y$ -axis and then translated downwards by 8 units to  $(-4, -7)$ . Find the coordinates of  $Q$ .  
A.  $(-4, -15)$   
B.  $(-4, -1)$   
C.  $(4, -15)$   
D.  $(4, 1)$

**END OF PAPER**