

# DE MAZENOD COLLEGE

FIRST TERM TEST - 2024

MATHEMATICS - GRADE 9.

Paper 1



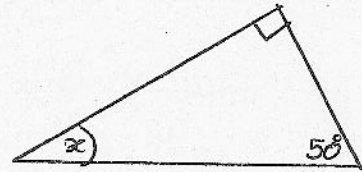
2 hours

Class No: .....

Answer all the questions in the given space.

- (1) 4, 9, 14, write the next two terms of this number pattern.

- (2) Find the value of  $x$ .



- (3) If  $x = \frac{1}{2}$ , find the value of  $8x$ .

- (4) Turn  $5\text{m}^3$  to litres.

- (5) An item bought at Rs. 7500 was sold at Rs. 8000.  
Find the profit percentage.

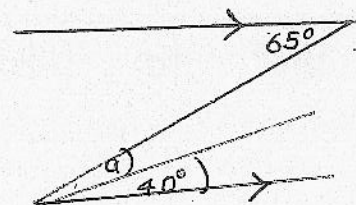
(6) Turn  $45_{\text{ten}}$  into binary.

(7) Simplify  $\frac{3}{5}$  of  $\frac{2}{9}$ .

(8) Factorize  $4x^2 + 8xy + 12x$

(9) In a cuboidal container with the area of the base at  $200\text{cm}^2$ , has water filled upto  $12\text{cm}$ . Find the volume of the water in it.

(10) Find the value of  $a$  (Give reasons for your answer.)



(11) Simplify.  $(x+5)(x+3)$ .

(5) Factorize

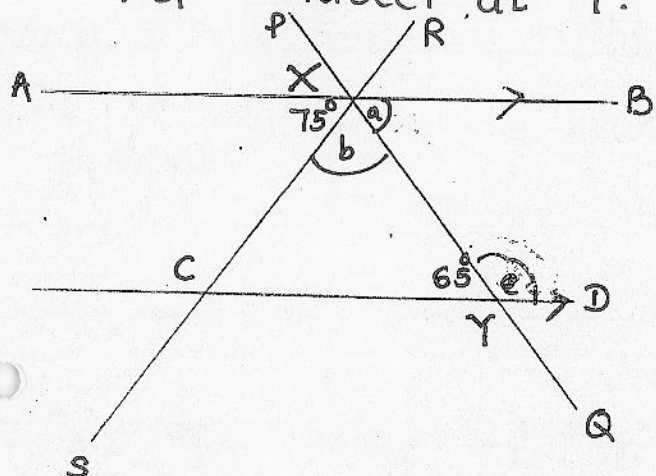
(i)  $ax^2 + 3x + abx + 3b$

(ii)  $x^2 - 11x + 30$

(iii)  $x^2 + 9x - 22$

(iv)  $5x^2 - 125$

(6) AB, SR and PQ intersect at X and CD and PQ intersect at Y.



(i) Name two parallel lines and a transversal.

(ii) What is the allied angle of  $\angle BXC$ .

(iii)  $\angle YQ = \angle BXC$ . What type of angles are they?

(iv) Find the values of  $a$ ,  $b$  and  $c$  giving reasons.

(7) The production cost of a bicycle is Rs. 14000. The producer sells it to a shop with a 10% profit.

(i) Find the price, the producer sold at.

(ii) The shop owner marks the price at Rs. 17710.

What is the profit he expects?

(iii) What is the profit percentage of (ii)?

(iv) When the bicycle is sold at spot cash, 5% discount is offered. How much does a customer pay for it?

(v) Who claims a better profit? the producer or the shop keeper? Prove your answer.

• end •