

O Level Math

4024/12

Paper 1

May June 2022

1. Observation & prediction of pattern using reasoning



2. Complete the table

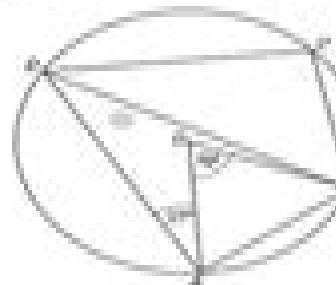
Number of dots	1	2	3	4	5	6	7
Number of dots	1	4	7	10	13	16	19

3. Write an expression, in terms of n , for the number of dots in Pattern n .

$$\text{Ans: } \text{Obj: Question 3(a) in the Higher } \frac{a_n + b_n}{2} \text{ or } a_n = \frac{1}{2} + 3n^2$$

$$2 = \frac{1}{2} + 3n^2 \quad (n)$$

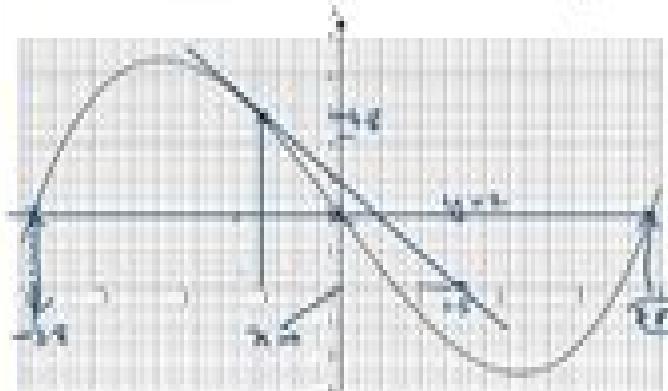
4. (a) Sketch the diagram



ANSWER
STATE

(b) If AB is a chord on the circle, calculate the
size of $\angle AOB$.

$$\text{Ans: } \text{Obj: Question 3(b) in the Higher } y - 2 = \frac{3}{2}x + 3x \quad y = \frac{9}{2}x + 2$$



ANSWER
STATE

5. By drawing a tangent, estimate the gradient of the curve at $x = 1$.

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Emilie Sanchez

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