

PYQSide

JEE MAIN CONIC SECTIONS — PARABOLA: TANGENT AND NORMAL (JEE) — PYQS

Max. Marks: 16

Questions: 4

Section A (MCQ)

- Q.1** Let O be the vertex of the parabola $y^2 = 4x$ and its chords OP and OQ are perpendicular to each other. If the locus of the mid-point of the line segment PQ is a conic C, then the length of its latus rectum is :

[JEE Main 2026 (Online) 8th April Evening Shift]

- (1) 1 (2) 2 (3) 4 (4) 8

Scan or tap for the
full solution



- Q.2** Let chord PQ of length $3\sqrt{13}$ of the parabola $y^2 = 12x$ be such that the ordinates of points P and Q are in the ratio 1:2. If the chord PQ subtends an angle α at the focus of the parabola, then $\sin \alpha$ is equal to :

[JEE Main 2026 (Online) 6th April Morning Shift]

- (1) $\frac{3}{5}$ (2) $\frac{4}{5}$ (3) $\frac{5}{13}$ (4) $\frac{12}{13}$

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full solution



- Q.3** The shortest distance between the curves $y^2 = 8x$ and $x^2 + y^2 + 12y + 35 = 0$ is:

[JEE Main 2025 (Online) 3rd April Evening Shift]

- (1) $2\sqrt{3} - 1$ (2) $2\sqrt{2} - 1$
(3) $3\sqrt{2} - 1$ (4) $\sqrt{2}$

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Section B (Numerical)

- Q.4** Let r be the radius of the circle, which touches x-axis at point (a, 0), $a < 0$ and the parabola $y^2 = 9x$ at the point (4, 6). Then r is equal to _____.

[JEE Main 2025 (Online) 8th April Evening Shift]

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ANSWER KEY

Section A (MCQ)

Ques.	1	2	3										
Ans.	2	1	2										

Section B (Numerical)

Ques.	4												
Ans.	30												