

NY State Algebra 2 Regents Exam Problems: Parabolas from Vertex and Directrix

June 15, 2024

January 2024

Problem 9

The equation of the parabola that has its focus at the point $(-3, 2)$ and directrix at $y = 0$ is

1. $x = -\frac{1}{8}(y - 1)^2 - 3$
2. $x = -\frac{1}{8}(y - 2)^2 - 3$
3. $x = -8(y - 1)^2 - 3$
4. $x = -8(y - 2)^2 - 3$

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August 2023

Problem 12

Which equation represents a parabola with vertex at $(2, -1)$ and directrix $x = 3$?

1. $(x - 2)^2 = 4(y + 1)$
2. $(y + 1)^2 = 4(x - 2)$
3. $(x - 2)^2 = -4(y + 1)$
4. $(y + 1)^2 = -4(x - 2)$

June 2023

Problem 10

The equation of the parabola that has its vertex at $(0, 0)$ and directrix $y = -4$ is

1. $y = \frac{1}{16}x^2$
2. $y = -\frac{1}{16}x^2$
3. $x = \frac{1}{16}y^2$
4. $x = -\frac{1}{16}y^2$