

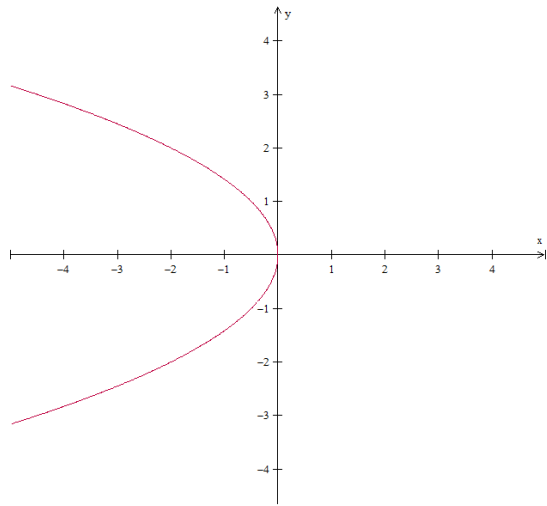
## Homework: The Parabola

In Problems 1-2, find the focus and directrix of each parabola with the given equation. Then match each equation to one of the graphs that are shown

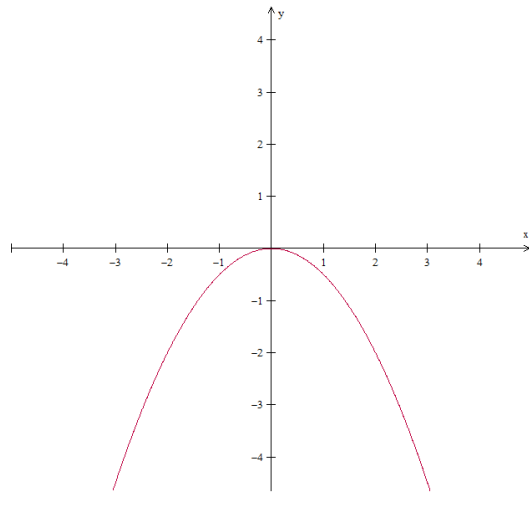
1.  $y^2 = 2x$

2.  $x^2 = -2y$

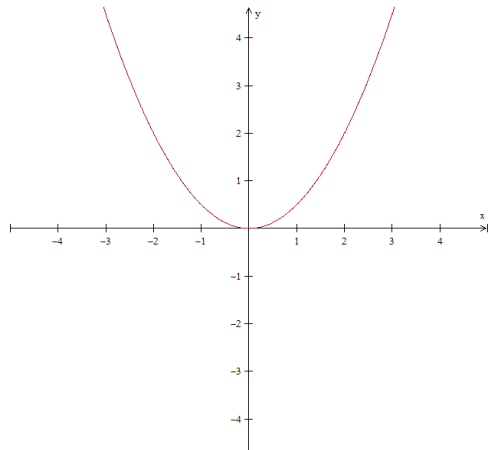
a.



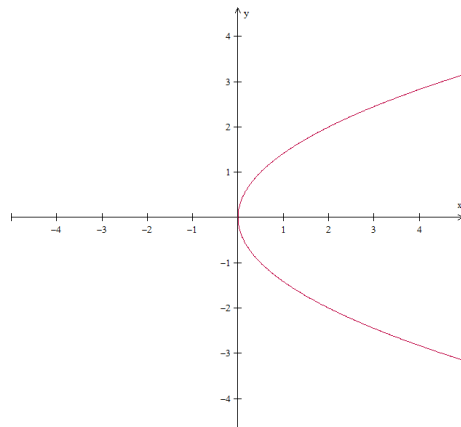
b.



c.



d.



### Homework: The Parabola

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In Problems 3-8, find the focus and directrix of the parabola with the given equation. Then graph the parabola

3. $y^2 = 8x$	4. $y^2 = -4x$
5. $x^2 = 10y$	6. $x^2 = -8y$
7. $y^2 + 8x = 0$	8. $4x^2 + 2y = 0$

In Problems 9-15, find the standard form of the equation of each parabola satisfying the given conditions

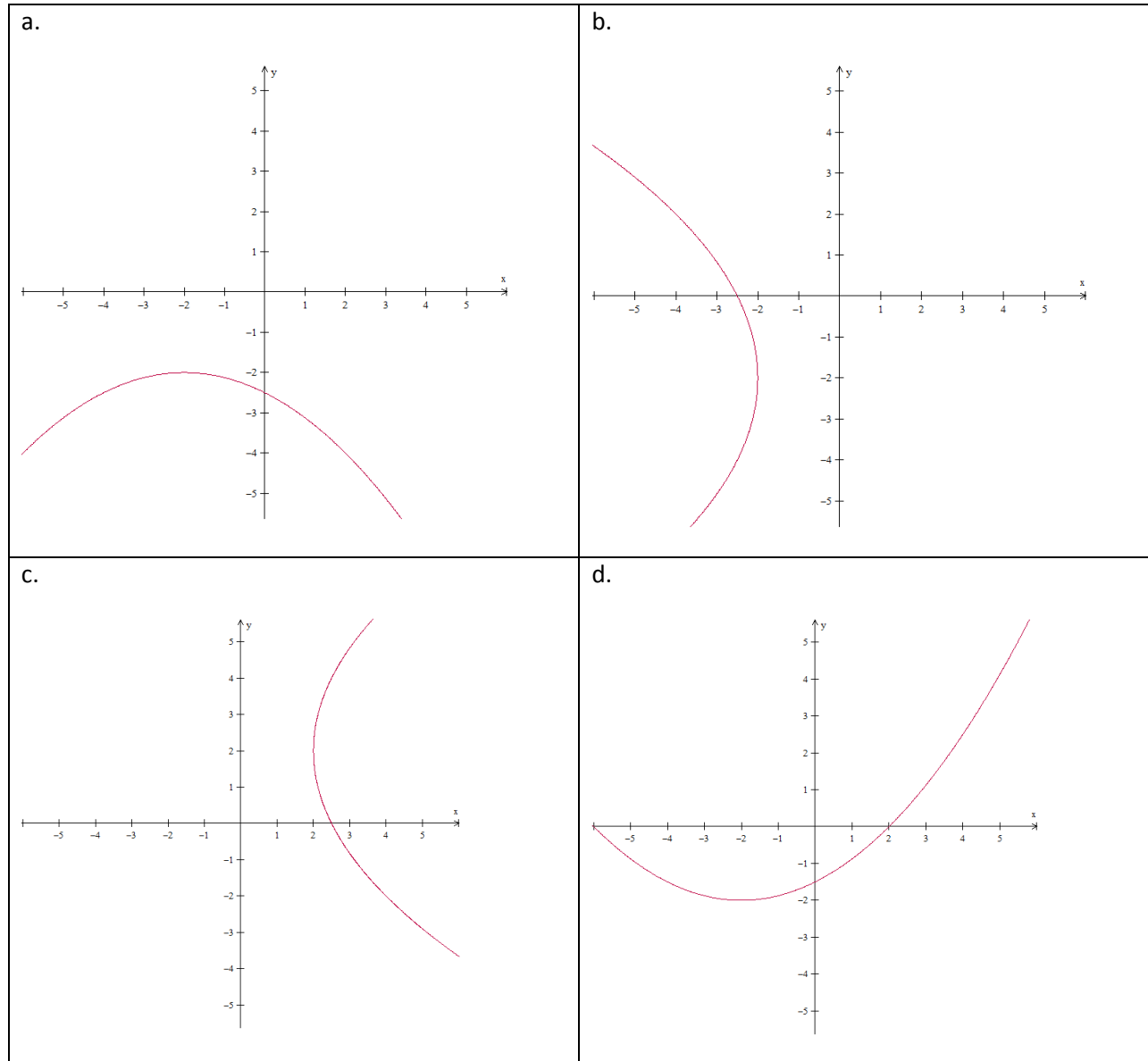
9. Focus: (3, 0); Directrix: $x = -3$	10. Focus: (2, 0); Directrix: $x = 4$
11. Focus: (0, -2); Directrix: $y = 5$	12. Focus: (0, 10); Directrix: $y = -2$
13. Vertex: (3, -1); Focus: (3, -3)	14. Focus: (5, 1); Directrix: $x = -2$
15. Focus: (-1, -3); Directrix: $y = -5$	

## Homework: The Parabola

In Problems 16-17, find the vertex, focus, and directrix of each parabola with the given equation. Then match each equation to one of the graphs that are shown.

16.  $(y - 2)^2 = 8(x - 2)$

17.  $(x + 2)^2 = -8(y + 2)$



### Homework: The Parabola

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In Problems 18-21, find the vertex, focus, and directrix of each parabola with the given equation. Then graph the parabola

18. $(x - 3)^2 = 4(y + 2)$	19. $(x + 1)^2 = 6(y - 4)$
20. $(y + 4)^2 = 8(x - 2)$	21. $(y - 1)^2 = -12x$