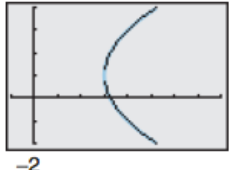
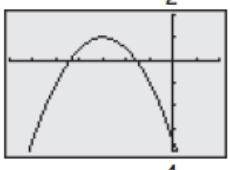
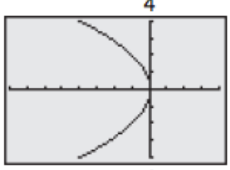
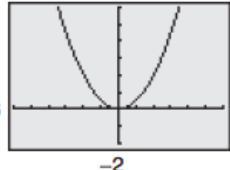
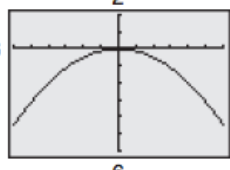
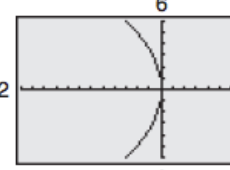


Parabolas WKST

I. Match the equation with its graph.

<p>(a) </p> <p>(c) </p> <p>(e) </p>	<p>(b) </p> <p>(d) </p> <p>(f) </p>	<p>1. $y^2 = -4x$</p> <p>2. $x^2 = 2y$</p> <p>3. $x^2 = -8y$</p> <p>4. $y^2 = -12x$</p> <p>5. $(y-1)^2 = 4(x-3)$</p> <p>6. $(x+3)^2 = -2(y-1)$</p>
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II. Find the vertex, focus, directrix, and axis of symmetry. Then, sketch the graph.

7. $(x-3)^2 = -4(y+2)$	8. $(y+5)^2 = 12(x+1)$	9. $(y-7)^2 = -2(x-2)$	10. $(x-5) - (y+4)^2 = 0$
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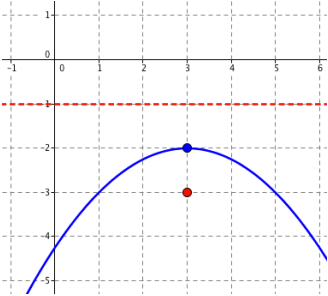
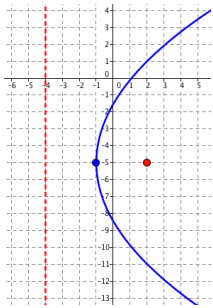
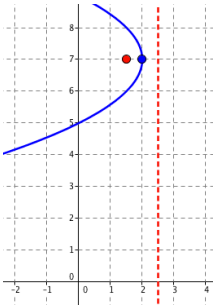
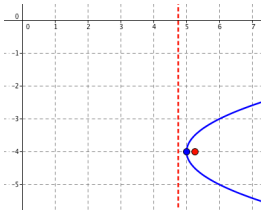
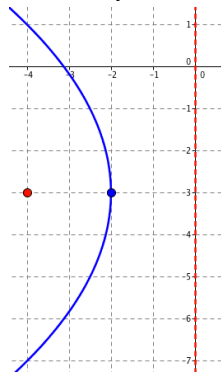
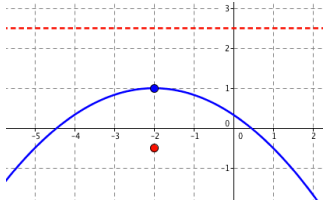
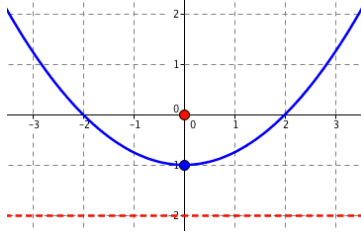
III. Rewrite the equation in standard form. Then, find the vertex, focus, directrix, and axis of symmetry and sketch the graph.

11. $y^2 + 6y + 8x + 25 = 0$	12. $x^2 + 4x + 6y - 2 = 0$	13. $x^2 - 4y - 4 = 0$
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IV. Write an equation for each parabola described below.

14. vertex (0, 1); focus (0, -4)	15. vertex (1, 8); directrix $y = 5$
16. focus (2, 4); directrix $x = -6$	17. endpoints of the latus rectum: (1, 1) & (1, 5) the parabola opens to the left

ANSWERS

1. E	2. B	3. D	4. F	5. A	6. C
<p>7.</p> <p>V: (3, -2) F: (3, -3) D: $y = -1$ AOS: $x = 3$</p> 		<p>8.</p> <p>V: (-1, -5) F: (2, -5) D: $x = -4$ AOS: $y = -5$</p> 		<p>9.</p> <p>V: (2, 7) F: (1.5, 7) D: $x = 2.5$ AOS: $y = 7$</p> 	
<p>10.</p> <p>V: (5, -4) F: (5.25, -4) D: $x = 4.75$ AOS: $y = -4$</p> 		<p>11.</p> <p>$(y+3)^2 = -8(x+2)$ V: (-2, -3) F: (-4, -3) D: $x = 0$ AOS: $y = -3$</p> 			
<p>12.</p> <p>$(x+2)^2 = -6(y-1)$ V: (-2, 1) F: (-2, -0.5) D: $y = 2.5$ AOS: $x = -2$</p> 		<p>13.</p> <p>$x^2 = 4(y+1)$ V: (0, -1) F: (0, 0) D: $y = -2$ AOS: $x = 0$</p> 			
14. $x^2 = -20(y-1)$	15. $(x-1)^2 = 12(y-8)$	16. $(y-4)^2 = 16(x+2)$	17. $(y-3)^2 = -4(x-2)$		