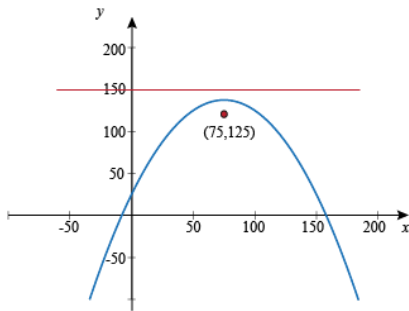


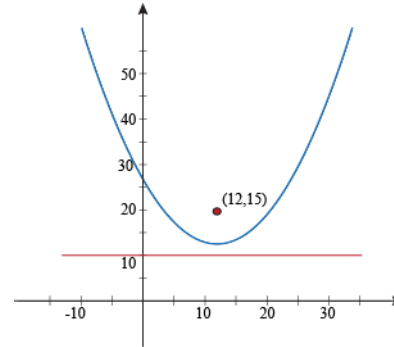
1) What is the equation of the parabola with focus (5, 7) and directrix $y = 2$?

2) What is the equation of the parabola with focus (-4, 9) and directrix $y = 6$?

3) Obviously distracted by Peeta's witty charm, Katniss's shot missed by a mile when her arrow followed the trajectory of the parabola with focus (75, 125) and directrix $y = 150$. Which equation describes the arrow's trajectory?



4) Write the equation of the parabola?



5. Write the equation of a parabola with vertex of (0,0) and such that the point (1,3) is on the parabola.

6. Write the equation of a parabola with vertex of (-4, 6) and such that the point (2,-12) is on the parabola.

7. Graph the parabola with vertex (5,3) and directrix of $y=1$. Be sure to use the Latus Rectum, and to include focus and directrix and line of symmetry.

8. Graph the parabola with vertex (-2,4) and focus of (-2,1). Be sure to use the Latus Rectum, and to include focus and directrix and line of symmetry.

For 9 and 10, Graph the Parabola.

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

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