

When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

준선이  $y = -p$  이고 초점이  $(0, p)$  일 때,  
포물선에서의 기울기가  $m$ 인 접선의 방정식을  
구하여라.[기하적 접근]

(When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach])

When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

▶ End

When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

▶ End

---

$$y = -p$$

When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

▶ End

$F(0, p)$

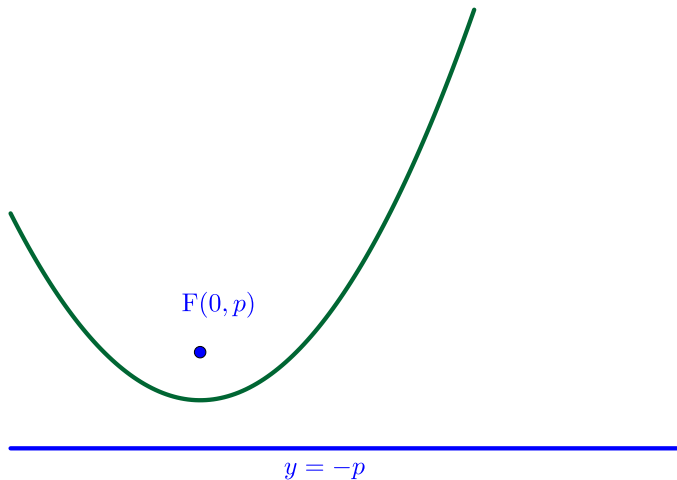


$y = -p$

When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

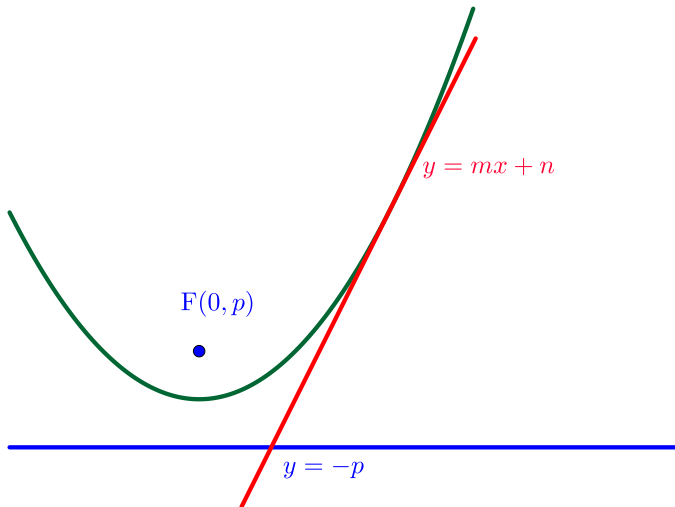
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

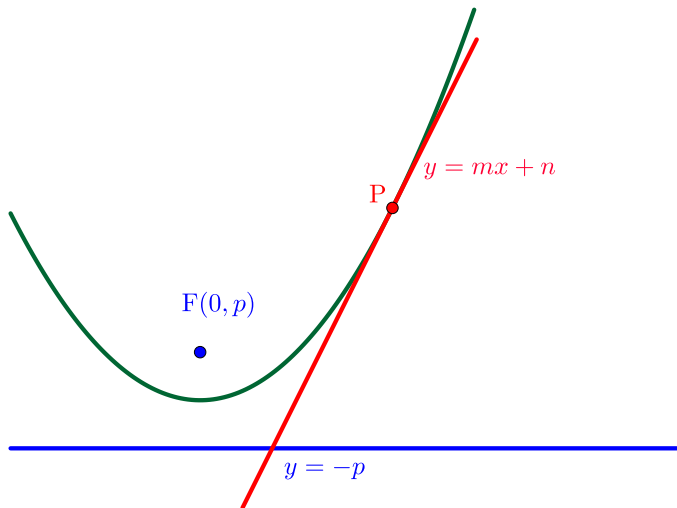
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

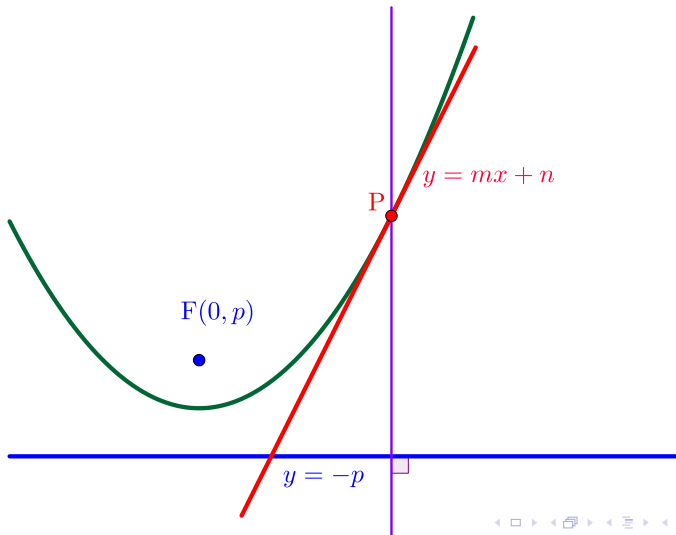
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola. [Geometric Approach]

▶ Start

▶ End

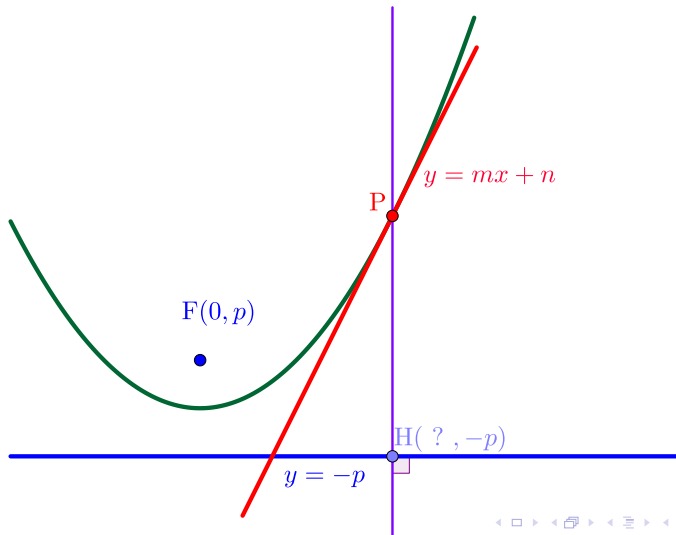




When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

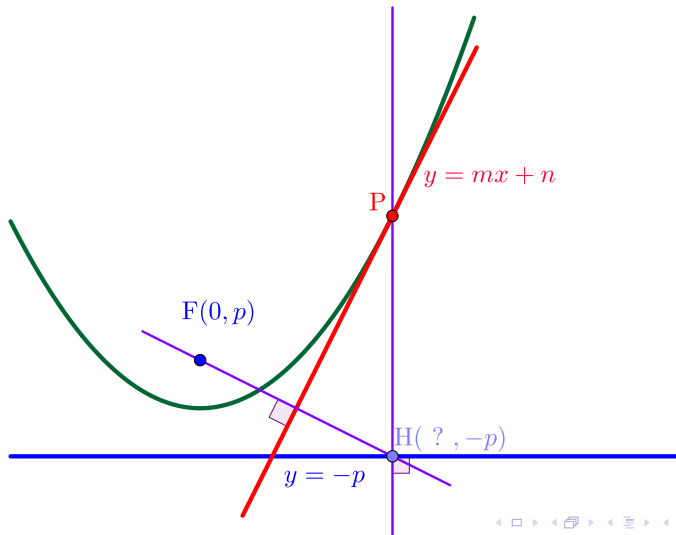
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

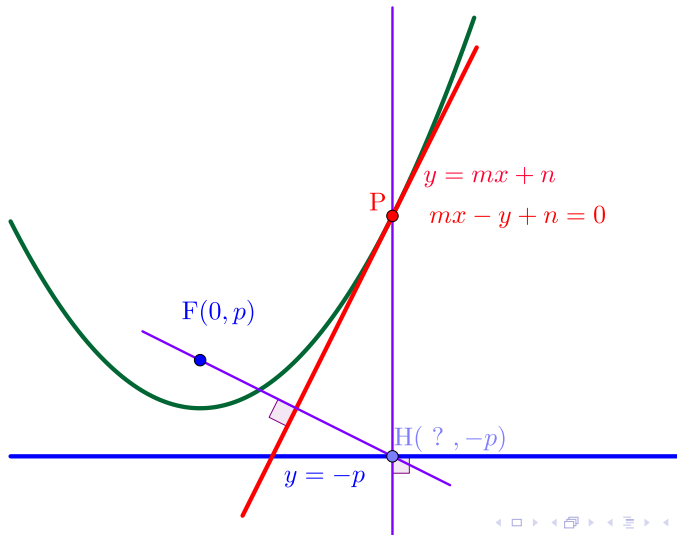
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

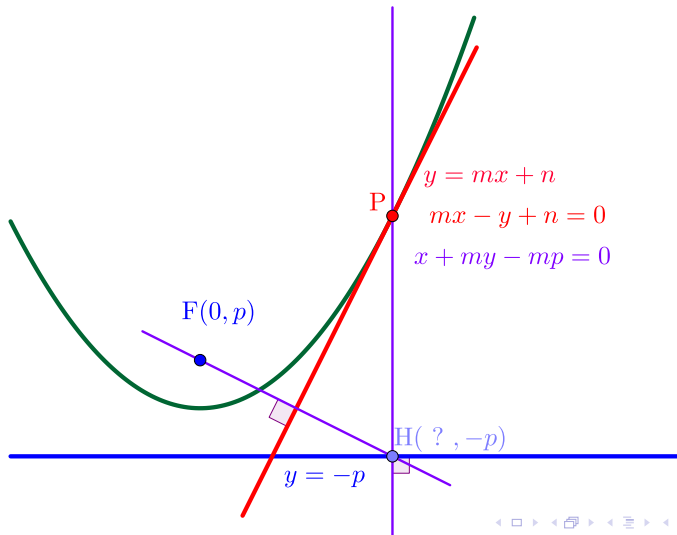
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

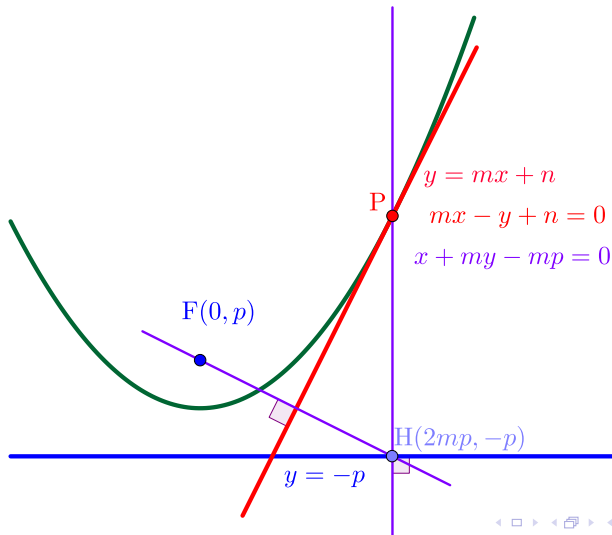
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

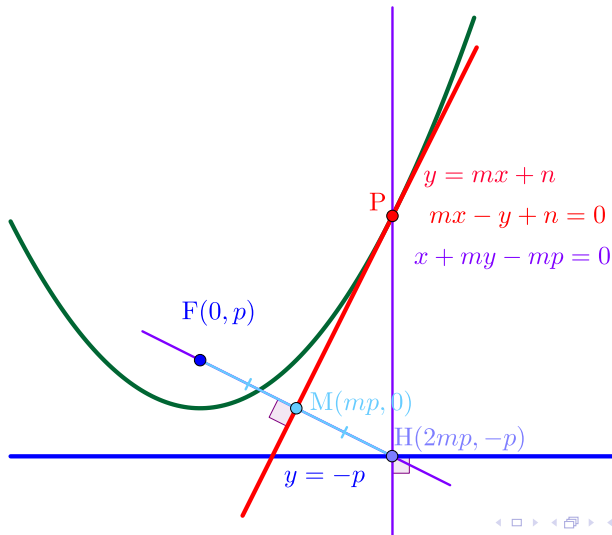
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

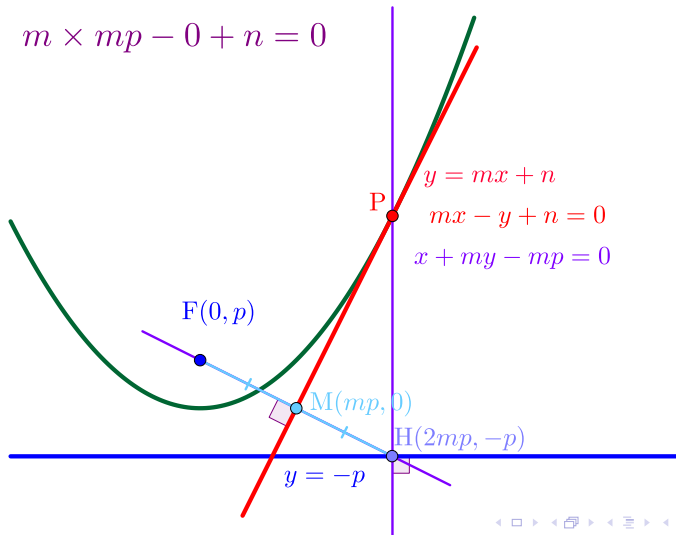
▶ End



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

▶ End



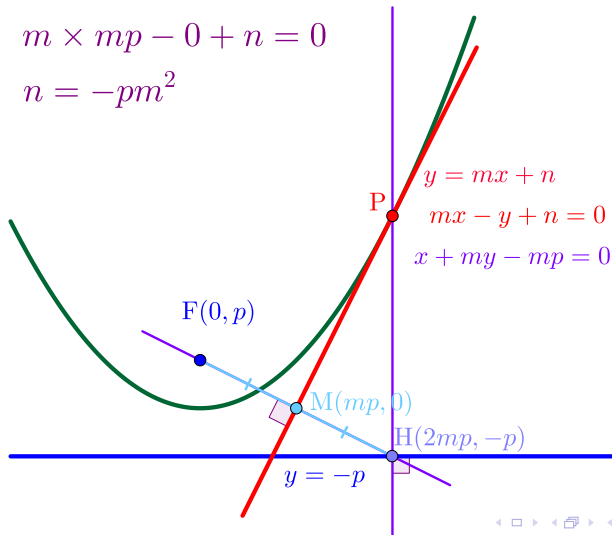
When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

▶ Start

▶ End

$$m \times mp - 0 + n = 0$$

$$n = -pm^2$$





When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

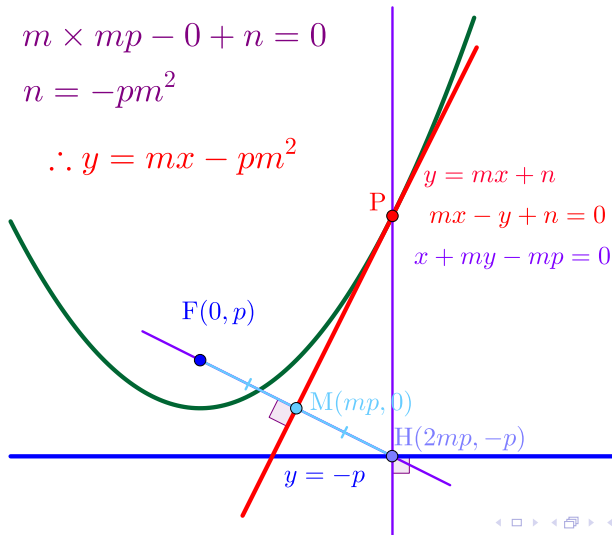
▶ Start

▶ End

$$m \times mp - 0 + n = 0$$

$$n = -pm^2$$

$$\therefore y = mx - pm^2$$



When a directrix is  $y = -p$  and a focus is  $(0, p)$ , find the equation for the tangent line having slope  $m$  to the parabola.[Geometric Approach]

Github:

<https://min7014.github.io/math20220328001.html>

Click or paste URL into the URL search bar,  
and you can see a picture moving.