Daily Agenda

Learning Targets: I can graph a parabola from its equation.

Homework
9.1 Day 4 Worksheet

Assessments
9.1 Mini Quiz - 4/6
Unit 9 Test - 4/19

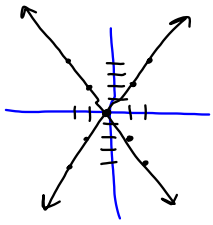
Life's most persistent and urgent question is, "What are you doing for others?" - Dr. Martin Luther King, Jr.

Nov 15-8:24 PM

4) $4x^2 - y^2 = 0$

$\pm\sqrt{4x^2} = \sqrt{y^2}$

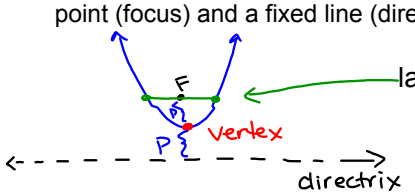
$y = \pm 2x$



Apr 4-11:19 AM

9.1 Parabolas

The set of all points equidistant from a fixed point (focus) and a fixed line (directrix).



4p
latus rectum
focus
vertex
directrix

Feb 9-11:33 AM

Standard Equation of a Parabola

$(x-h)^2=4p(y-k)$ $(y-k)^2=4p(x-h)$

Vertex (h,k)

Directrix is p units away from vertex

Focus is p units away from vertex

Latus Rectum is parallel to directrix, through focus, and 4p in length

x^2, + ↑

x^2, − ↓

y^2, + →

y^2, − ←

Feb 9-11:33 AM

Sketch the graph of the parabola. Include the vertex, focus, and directrix.

$8x = y^2 - 8y + 8$

$8x - 8 = y^2 - 8y + 16$

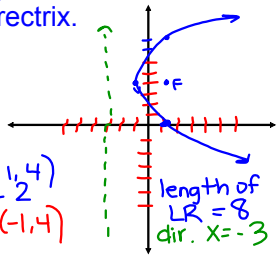
$+16 \quad +16$

$8x + 8 = (y-4)^2$

$8(x+1) = (y-4)^2$

$4p(x-h) = (y-k)^2$

F(1,4)
p = 2
V(-1,4)



Feb 9-11:33 AM

Sketch the graph of the parabola. Include the vertex, focus, and directrix.

$2y = x^2 + 4x + 12$

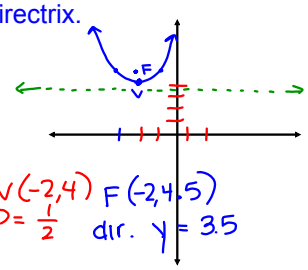
$2y - 12 = x^2 + 4x$

$+4 \quad +4$

$2y - 8 = x^2 + 4x + 4$

$2(y-4) = (x+2)^2$

$2 = 4p$



V(-2,4) F(-2,4.5)
$p = \frac{1}{2}$ dir. y = 3.5

Feb 9-11:33 AM