SECONDARY MATH II // MODULE 8
CIRCLES AND OTHER CONICS – 8.6

8.6

READY, SET, GO! Name Period Date

READY

Topic: Review of Circles

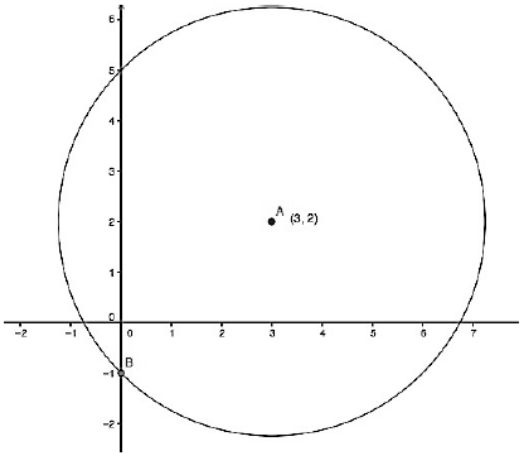
Use the given information to write the equation of the circle in standard form.

1. Center: (-5, -8) , Radius: 11

2. Endpoints of the diameter: (6, 0) and (2, -4)

3. Center (-5, 4) : Point on the circle (-9, 1)

4. Equation of the circle in the diagram to the right.



SET

Topic: Writing equations of horizontal parabolas

Use the focus F, point M, a point on the parabola, and the equation of the directrix to sketch the parabola (label your points) and write the equation. Put your equation in the form $x = \frac{1}{4p}(y-k)^2 + h$ where "p" is the distance from the focus to the vertex.

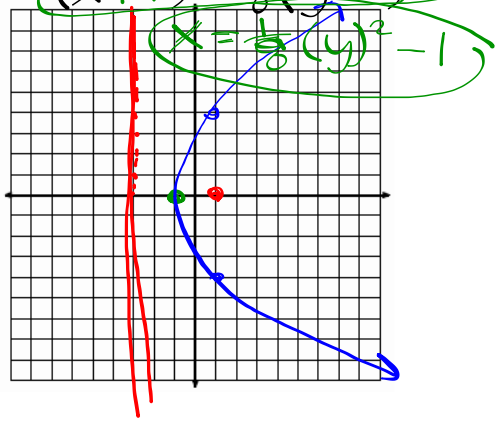
$(x-h) = \frac{1}{4p}(y-k)^2$

5. ~~$F(1,0)$~~, $M(1,4)$ x = -3

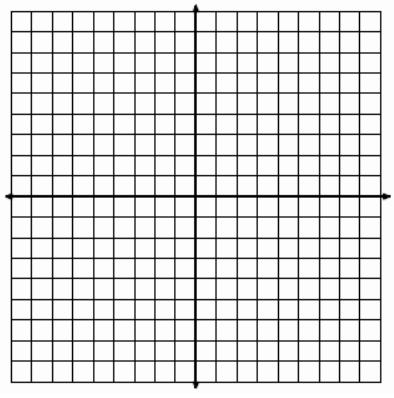
$V = (-1, 0)$ h k

$(x+1) = \frac{1}{8}(y-0)^2$

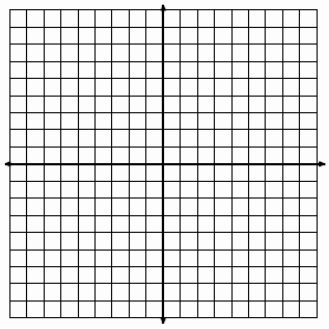
$x = \frac{1}{8}(y)^2 - 1$



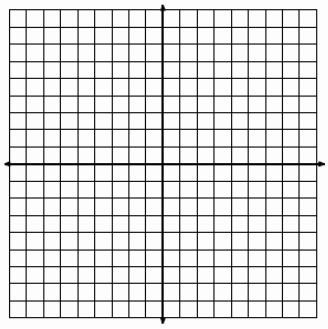
6. $F(3,1)$, $M(3,-5)$ x = 9



7. $F(7,-5)$, $M(4,-1)$ x = 9



8. $F(-1,2)$, $M(6,-9)$ x = -7



GO

Topic: Identifying key features of a quadratic written in vertex form

State (a) the coordinates of the vertex, (b) the equation of the axis of symmetry, (c) the domain, and (d) the range for each of the following functions.

9. $f(x)=(x-3)^2+5$

vertex (3, 5)

A.O.S. $x=3$

domain $(-\infty, \infty)$

range $[5, \infty)$

10. $f(x)=(x+1)^2-2$

11. $f(x)=-(x-3)^2-7$

12. $f(x)=-3\left(x-\frac{3}{4}\right)^2+\frac{4}{5}$

13. $f(x)=\frac{1}{2}(x-4)^2+1$

14. $f(x)=\frac{1}{4}(x+2)^2-4$