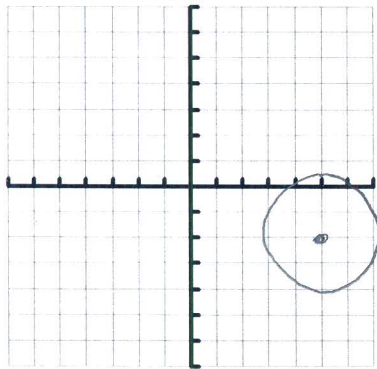


Graph and provide the requested information:

1. $(x - 5)^2 + (y + 2)^2 = 5$

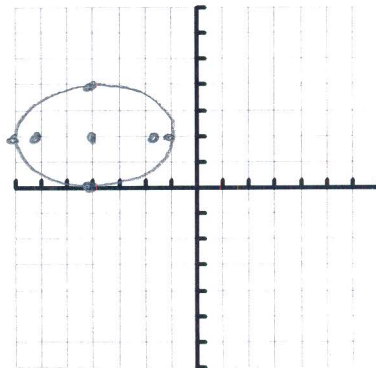
$c = (5, -2)$
 $r = \sqrt{5}$



2. $\frac{(x+4)^2}{9} + \frac{(y-2)^2}{4} = 1$

$c = \sqrt{5}$

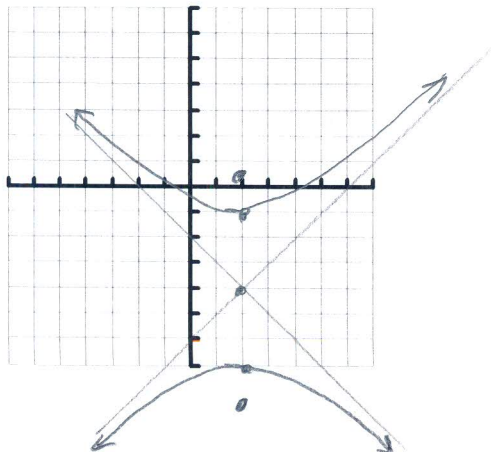
$c = (-4, 2)$
 $v = (-7, 2) \quad (-1, 2)$
 $cv = (-4, 4) \quad (-4, 0)$
 $f = (-4 \pm \sqrt{5}, 2)$
 major axis length = 6
 minor axis length = 4



3. $\frac{(y+4)^2}{9} - \frac{(x-2)^2}{9} = 1$

$c = \sqrt{18}$
 $c = 3\sqrt{2}$

$c = (2, -4)$
 $v = (2, -7) \quad (2, -1)$
 $f = (2, -4 \pm 3\sqrt{2})$
 asymptotes = $y + 4 = \pm 1(x - 2)$
 length of transverse axis = 6



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

$4p = -4$
 $p = -1$

$v = (3, 0)$
 $f = (2, 0)$
 directrix = $x = 4$
 length of LR = 4
 ends of LR = $(2, -2) \quad (2, 2)$

