

p449: 1, 2, 12, 13, 98, 99

1. $\frac{x^2}{16} - \frac{y^2}{9} = 1$ \longleftrightarrow $a=4$ $b=3$ $c=5$

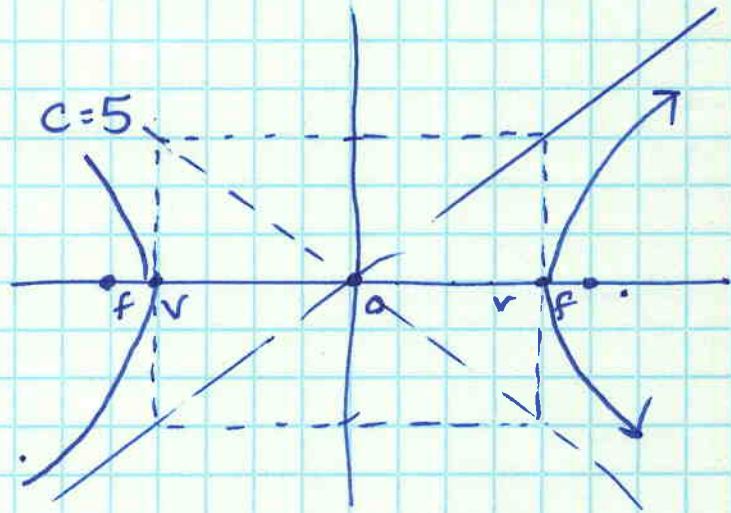
center (0,0)

V (-4,0) (4,0)

F (-5,0) (5,0)

$m_1 = \frac{3}{4}$ $m_2 = -\frac{3}{4}$

$A_1 = y = \frac{3}{4}x$ $A_2 = y = -\frac{3}{4}x$



2. $\frac{y^2}{4} - \frac{x^2}{17} = 1$ \updownarrow $a=2$ $b=\sqrt{17} \approx 4.1$ $c=\sqrt{21} \approx 4.6$

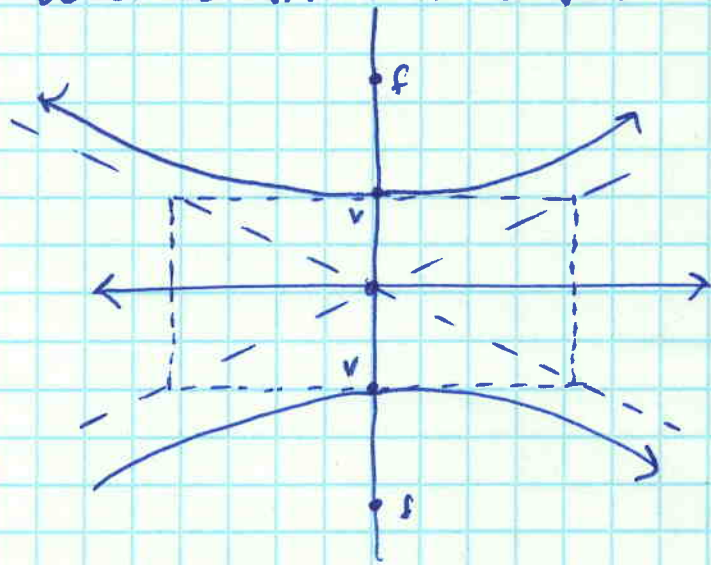
center (0,0)

V (0,-2) (0,2)

F (0,-4.6) (0,4.6)

$m_1 = \frac{2}{4} = \frac{1}{2}$ $m_2 = -\frac{1}{2}$

$A_1 = y = \frac{1}{2}x$
 $A_2 = y = -\frac{1}{2}x$



12. $\frac{(x+5)^2}{9} - \frac{(y+4)^2}{48} = 1$ \longleftrightarrow $a=3$ $b=\sqrt{48} \approx 6.9$ $c=\sqrt{57} \approx 7.5$

center (-5,-4)

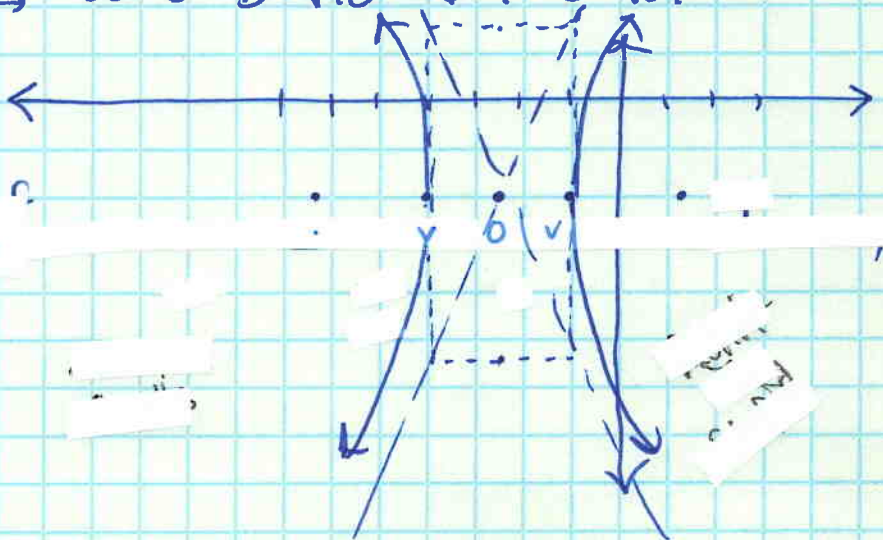
V (-2,-4) (-8,-4)

F (2.5,-4) (-12.5,-4)

$m_1 = \frac{6.9}{3}$ $m_2 = -\frac{6.9}{3}$

$A_1 = y = -4 + \frac{6.9}{3}(x+5)$

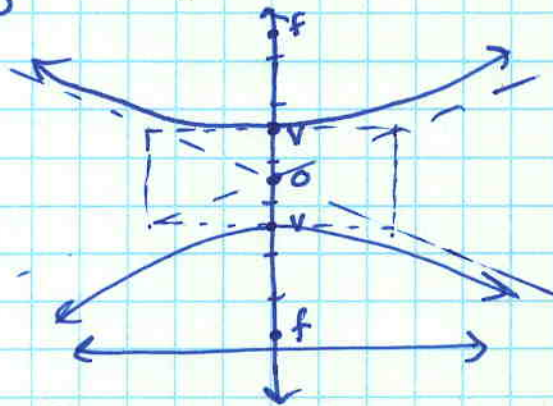
$y = -4 - \frac{6.9}{3}(x+5)$



$$13) \frac{(y-7)^2}{4} - \frac{x^2}{33} = 1 \quad \updownarrow \quad a=2 \quad b=\sqrt{33} \approx 5.75 \quad c=\sqrt{37} \approx 6.1$$

Center = (0, 7)

$v \ (0, 9) \ (0, 5)$
 $f \ (0, 13.1) \ (0, -9)$
 $m_1 \ \frac{2}{5.75} \quad m_2 \ = \ -\frac{2}{5.75}$



$$A_1 \ y = 7 + \frac{2}{5.75}x$$

$$A_2 \ y = 7 - \frac{2}{5.75}x$$

98. $2a=2 \quad a=1$
 $2b=2 \quad b=1$ (C)

99. (H)