8. LEFT

$a=1 \quad b=3 \quad c=\sqrt{10} \quad h=4 \quad k=-2$

CENTER: $(h,k) = (4,-2)$

TRANSVERSE AXIS: $y=-2$

FOCI: $(h+c, k) \quad (h-c, k)$

$(4+\sqrt{10}, -2) \quad (4-\sqrt{10}, -2)$

VERTICES: $(h+a, k) \quad (h-a, k)$

$(4+1, -2) \quad (4-1, -2)$

$(5, -2) \quad (3, -2)$

ASYMPTOTES: $y-k = \pm \frac{b}{a}(x-h)$

$y-(-2) = \pm \frac{3}{1}(x-4)$

$y+2 = \pm 3(x-4)$

$y = -2 \pm 3(x-4)$

(+) (−)

$y = -2 + 3(x-4)$ $\qquad$ $y = -2 - 3(x-4)$

$y = 3x-14$ $\qquad$ $y = -3x+10$