Hyperbola in Standard Form

Identify the vertices, foci, and direction of opening of each.

1) $\frac{y^2}{25} - \frac{x^2}{16} = 1$
Vertices: _____
Foci: _____
Direction: _____

2) $\frac{x^2}{121} - \frac{y^2}{36} = 1$
Vertices: _____
Foci: _____
Direction: _____

3) $\frac{x^2}{121} - \frac{y^2}{81} = 1$
Vertices: _____
Foci: _____
Direction: _____

4) $\frac{x^2}{81} - \frac{y^2}{4} = 1$
Vertices: _____
Foci: _____
Direction: _____

5) $\frac{(x+2)^2}{169} - \frac{(y+8)^2}{4} = 1$
Vertices: _____
Foci: _____
Direction: _____

6) $\frac{(y+8)^2}{36} - \frac{(x+2)^2}{25} = 1$
Vertices: _____
Foci: _____
Direction: _____

7) $\frac{(y-7)^2}{100} - \frac{(x+9)^2}{100} = 1$
Vertices: _____
Foci: _____
Direction: _____

8) $\frac{(x-5)^2}{36} - \frac{(y-4)^2}{81} = 1$
Vertices: _____
Foci: _____
Direction: _____

9) $\frac{(y-10)^2}{144} - \frac{(x+10)^2}{16} = 1$
Vertices: _____
Foci: _____
Direction: _____

10) $\frac{(y+5)^2}{4} - \frac{(x-8)^2}{49} = 1$
Vertices: _____
Foci: _____
Direction: _____

11) $\frac{(y-9)^2}{169} - \frac{(x+5)^2}{49} = 1$
Vertices: _____
Foci: _____
Direction: _____

12) $\frac{(x-7)^2}{25} - \frac{(y-1)^2}{195} = 1$
Vertices: _____
Foci: _____
Direction: _____

13) $\frac{(x)^2}{4} - \frac{(y-1)^2}{16} = 1$
Vertices: _____
Foci: _____
Direction: _____

14) $\frac{(y-2)^2}{10} - \frac{(x)^2}{15} = 1$
Vertices: _____
Foci: _____
Direction: _____