9.4: The Hyperbola

Attendance Quiz

1. Fill in the *two* missing equations from the "Equation" column of the folowing table.

Equations of hyperbolas with center (h, k) and transverse axis parallel to a coordinate axis				
Equation	Trans. Axis	Foci	Vertices	Asymptotes
	horizontal	$(h \pm c, k)$	$(h \pm a, k)$	$y - k = \pm\frac{b}{a}(x - h)$
	vertical	$(h, k \pm c)$	$(h, k \pm a)$	$y - k = \pm\frac{a}{b}(x - h)$

2. Find the foci of the hyperbola given by $\frac{(x-6)^2}{4} - \frac{(y+4)^2}{12} = 1$.

3. Describe the graph of $y^2 - 4y - 4x^2 + 8x = 4$.