

**Write an equation for a hyperbola with the given set of characteristics.**

1. Foci:  $(-1, -9); (-1, -7)$       Conjugate axis length of 14 units

2. Vertices:  $(7, 5); (-5, 5)$       Foci:  $(11, 5); (-9, 5)$

3. Foci:  $(9, -1); (-3, -1)$       Conjugate axis length of 6 units

4. Vertices:  $(-3, -12); (-3, -4)$       Foci:  $(-3, -15); (-3, -1)$

5. Foci:  $(9, 7); (-17, 7)$       Asymptotes:  $y = \pm \frac{5}{12}x + \frac{104}{12}$

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6. Foci:  $(10, 0); (-6, 0)$       Transverse axis has a length of 4 units

7. Vertices:  $(-11, 0); (11, 0)$       Foci:  $(-14, 0); (14, 0)$

8. Foci:  $(5, 7); (5, -9)$       Transverse axis has a length of 10 units

9. Foci:  $(0, 5); (0, -5)$       Vertices:  $(0, 3); (0, -3)$

10. Vertices:  $(1, 15); (1, -5)$       Transverse axis has a length of 16 units