

p. 535 even answers

#2 translated up 5

~~#4~~ H.A. $y = -7$ V.A. $x = -2$

#6 $y = -\frac{1}{x}$

#8-11 no x - or y -intercept

H.A. $y = 0$ V.A. $x = 0$
(x -axis) (y -axis)

Dom: $x \neq 0$ Range: $y \neq 0$

How to find asymptotes from equation:

$$y = f(x) = \frac{a}{x-h} + k$$

"reciprocal function family"

horizontal asymptote: $y = k$

vertical asymptote: $x = h$

$$y = \frac{1}{x+42} - 51$$

$$\text{H.A. } y = -51$$

$$\text{V.A. } x = -42$$

$$\text{Dom: } x \neq -42$$

$$\text{Range: } y \neq -51$$

$$y = \frac{14}{x-3} + 6$$

$$\text{H.A. } y = 6$$

$$\text{V.A. } x = 3$$

$$\text{Dom: } x \neq 3$$

$$\text{Range: } y \neq 6$$

$$y = \frac{-3}{x+1} - 5$$

$$\text{H.A. } y = -5$$

$$\text{V.A. } x = -1$$

$$x-h = x+1$$

$$-h = 1$$

$$h = -1$$

$$\text{Dom: } x \neq -1$$

$$\text{Range: } y \neq -5$$

Graphically finding asymptotes:

