

10. a) Vertical asymptote.
 $x = 0$.

Horizontal asymptote
 $y = 1$.

Horizontal intercepts.

$(-2, 0)$ $(3,$

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

$$a = 1 \quad b = 1$$

$$(h, k) = (0, 1)$$

$$f(x) = \frac{1}{x} + 1 \quad \text{or} \quad \frac{1+x}{x}.$$

10. a b 7 b) Vertical asymptotes
 $x = 2, \quad x = -7$

Horizontal asymptotes
 $y = -4$.

Horizontal intercepts.

$(-5, 0)$ $(-2, 0)$

$$f(x) = a \frac{(x+5)(x+2)}{(x-2)(x+7)}$$

$$y = -4.$$

$$f(x) = \frac{-4(x+5)(x+2)}{(x-2)(x+7)}.$$

$$f(x) = \frac{-4(x^2 + 7x + 10)}{x^2 + 5x - 14}.$$

$$f(x) = \frac{-4x^2 - 28x - 40}{x^2 + 5x - 14}.$$

