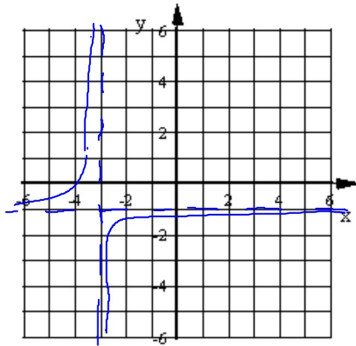


1. Graph this transformation of the parent function  $y = \frac{2}{x}$ .

Show asymptotes as dashed lines.

$$y = \frac{-2}{x+3} - 1$$



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x-axis Refl.  
 (branches in Quad II & IV)  
 3 Left  
 VA  $x = -3$   
 1 down  
 Hk  
 $y = -1$

2. Find this difference:

$$\frac{x+5}{x^2-4x-21} - \frac{3x}{x^2+8x+15} \cdot \frac{x-7}{x-7}$$

$$\frac{(x+5)(x+3)}{(x-7)(x+3)} - \frac{3x^2+21x}{(x+5)(x+3)(x-7)}$$

$$\frac{5x+25 - 3x^2-21x}{(x+5)(x+3)(x-7)}$$

$$\frac{-3x^2-16x+25}{(x-7)(x+3)(x+5)}$$

3. Simplify.

$$\frac{\frac{6}{x+4}}{\frac{-2}{x-6} + \frac{8x}{x^2-2x-24}}$$

$$\frac{6(x-6)}{-2(x+4) + 8x}$$

$$\frac{6(x-6)}{-2x-8+8x}$$

$$\frac{6x-36}{6x-8}$$

4. Simplify.

$$\frac{\frac{9x}{y^3} - \frac{4}{3x^2y}}{\frac{2}{6xy^2} + \frac{5}{x^3y}}$$

$$\frac{54x^4 - 8xy^2}{2x^2y + 30y^2}$$