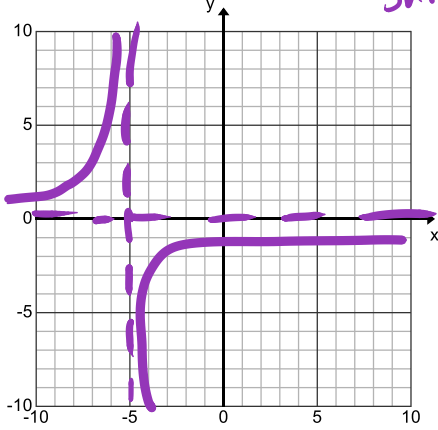


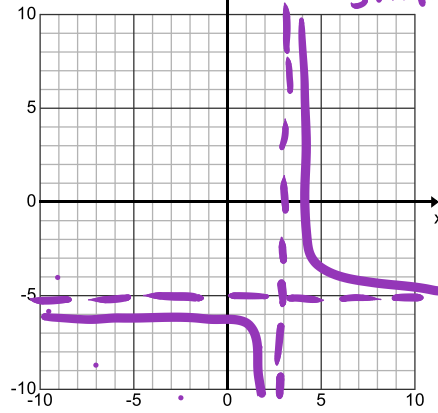
Directions: Complete with your partner. Turn in both sheets. Show work.

1. Use transformations to graph:

a. $f(x) = -\frac{1}{x+5}$ *refl. over x-axis*
Shift 5 left

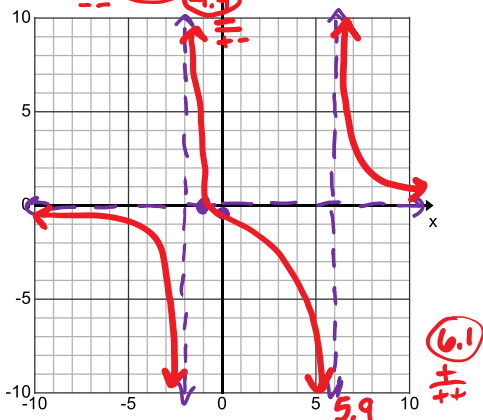


b. $f(x) = \frac{1}{x-3} - 5$ *Shift 3 Right*
Shift 5 down



2. (a-c) Find the Vertical Asymptote(s), Removable Discontinuities, Horizontal Asymptote or slant asymptote, x-intercept(s), y-intercept, and graph.

a. $f(x) = \frac{x+1}{x^2-4x-12} = \frac{x+1}{(x+2)(x-6)}$



V.A. $x = -2, x = 6$

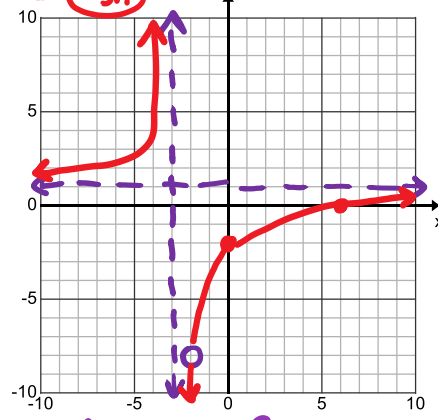
R.D. NONE

H.A. $y = 0$

x-int $x+1=0$
 $x = -1$

y-int $y = -\frac{1}{12}$

b. $f(x) = \frac{x^2-4x-12}{x^2+5x+6} = \frac{(x+2)(x-6)}{(x+2)(x+3)}$



V.A. $x = -3$

R.D. $(-2, -8)$

H.A. $y = 1$

x-int $x = 6$

y-int $y = -2$

$\frac{-2-6}{-2+3} = -8$

