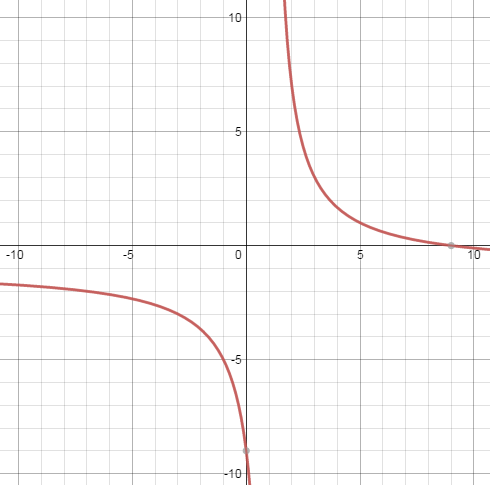
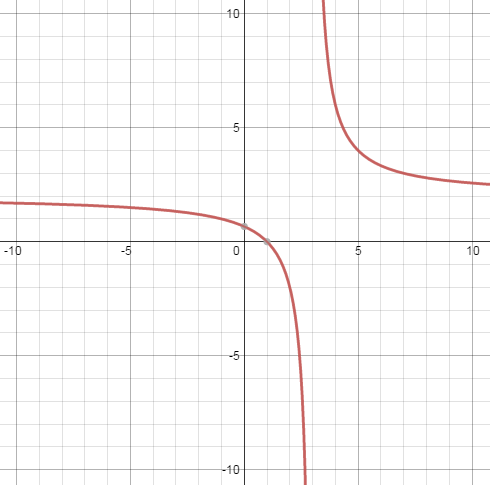
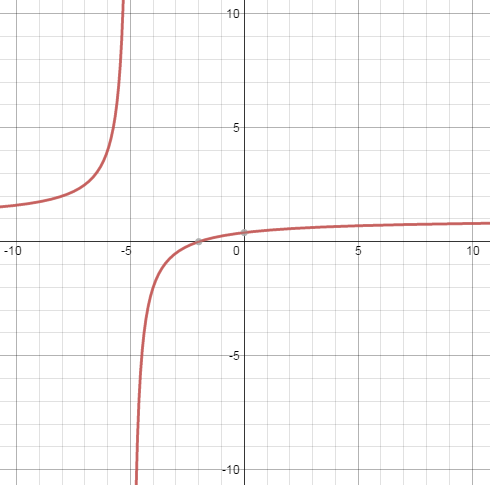
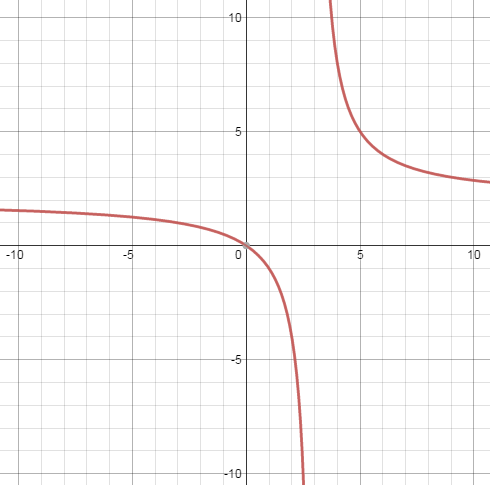
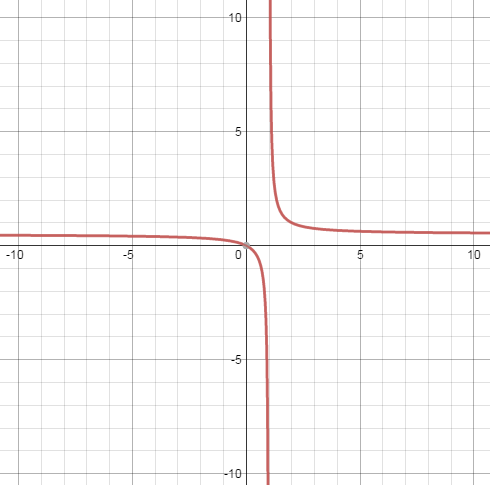
**Design Rational Functions which meet these requirements:**

1. f(x) so that the function…
   1. has a root at x= 8
   2. has a vertical asymptote at x= -5
2. g(x) so that the function…
   1. has a root at x= -1/2
   2. has a vertical asymptote at x= 3
3. h(x) so that the function…
   1. has a root at x= 4
   2. has a vertical asymptote at x= 1
   3. has a horizontal asymptote at y = 2
4. j(x) so that the function…
   1. has a root at x=3/2
   2. has a vertical asymptote at x= 4/5
   3. has a horizontal asymptote at y = 2
5. k(x) so that the function…
   1. is positive on the left side of the vertical asymptote
6. m(x) so that the function…
   1. is positive on the left side of the vertical asymptote
   2. has a root at x= 3
   3. has a vertical asymptote at x= 1/2
   4. has a horizontal asymptote at y = -4

**Given the following graphs of functions, give me a possible function which satisfies both the graph’s roots and the graph’s asymptotes.**

1.  8) 
2.  10) 
3. 
4. 