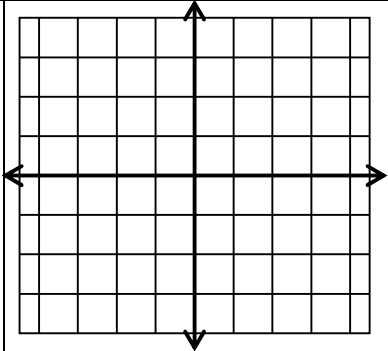
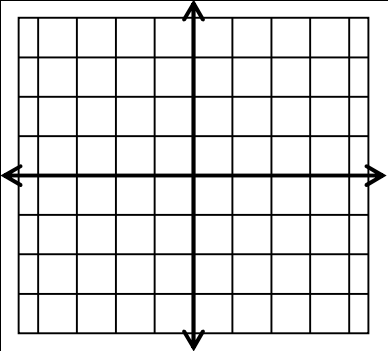
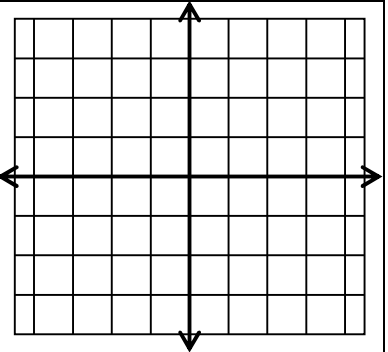
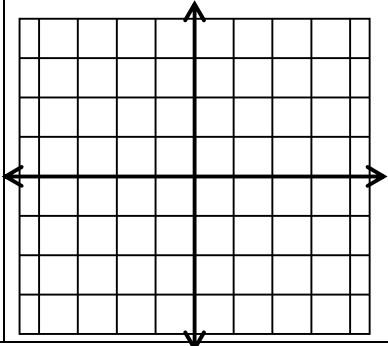
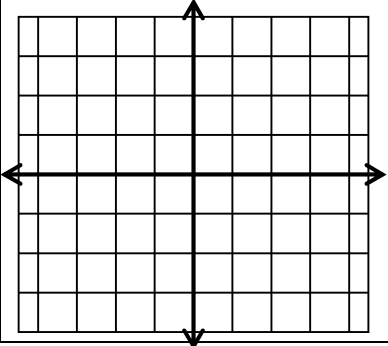
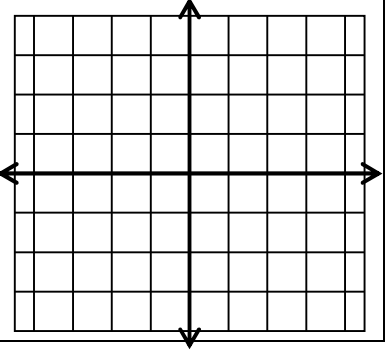


I. State all the A) x -intercepts, B) y -intercepts, C) asymptotes (vertical, horizontal, or slant), and D) holes in each of the following functions. Use this information to graph each.

<i>Problem:</i>	$f(x) = \frac{3x - 6}{x + 4}$	$g(x) = \frac{3x - 6}{x^2 - 4}$	$h(x) = \frac{3x^2 - 6}{x + 4}$
x -intercepts			
y -intercepts			
asymptotes			
holes			
Sketch the graph			

<i>Problem:</i>	$F(x) = \frac{x^2 - 3x}{x^2 - 9}$	$G(x) = \frac{5x - 6}{x^2 + 5x + 6}$	$H(x) = \frac{6x^2 - 2x - 8}{x - 4}$
x -intercepts			
y -intercepts			
asymptotes			
holes			
Sketch the graph			

REVIEWING FOR MASTERY!

II. For each of the following, perform the indicated operation and **simplify completely**:

1.) $\frac{4}{x-3} + \frac{-3}{x+2}$

2.) $\frac{4x}{x^2+3x-28} - \frac{3x-2}{x^2+8x+7}$

3.) $\frac{12x}{2x-6} \cdot \frac{x-3}{3x+9} \div \frac{6x}{x^2-9}$

4.) $\frac{12x}{2x-6} \cdot \left(\frac{x-3}{3x+9} - \frac{6x}{x^2-9} \right)$

5.) $\frac{\frac{4}{x} + \frac{x}{9}}{\frac{6}{4x^2} - \frac{5}{6}}$

6.) $\frac{\frac{4}{x} + \frac{-3}{x+2}}{\frac{6x}{x^2-4}}$

III. **Solve** the following equations and **check your solutions**:

7.) $\frac{4}{x-3} + \frac{-3}{x+2} = \frac{x}{x+4}$

8.) $\frac{3x-6}{x+4} = \frac{2x+1}{2x-3}$

9.) $\frac{5x-6}{x^2+5x+6} + \frac{5}{x+3} = \frac{9}{x+2}$

10.) $\frac{x-6}{3x^2+8x+5} - \frac{4}{x+1} = \frac{x}{3x+5}$