Acc. Geom/Algebra II Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Graphing Rationals Part 2 Problems Period \_\_\_\_\_\_\_Date \_\_\_\_\_\_\_\_\_\_\_\_

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.

|  |  |  |  |
| --- | --- | --- | --- |
| ***Problem:*** |  |  |  |
| ***x***-intercepts | 2 | 2 |  |
| ***y***-intercepts | -3/2 | 3/2 | -3/2 |
| asymptotes | y = 3, x = -4 | y = 0 | y = 3x-12 |
| holes | none | x=2 | none |
| Sketch the graph  (use graphing calculator to check answer) |  |  | Use window Xmin, Xmin=-80  Ymin, ymax=80 to see both parts of curve |

|  |  |  |  |
| --- | --- | --- | --- |
| ***Problem:*** |  |  |  |
| ***x***-intercepts | 0 | 6/5 | -1, 4/3 |
| ***y***-intercepts | 0 | -1 | 2 |
| asymptotes | y=1, x=-3 | x=-5, -1, y=0 | y=6x-22, x=4 |
| holes | x=3 | none |  |
| Sketch the graph  (use graphing calculator to check answer) |  | Notice this particular function crosses the asymptote before it begins to exhibit asymptotic behavior.  🡪 🡪 🡪 🡪 | Use window Xmin, Xmin = -160 Ymin, ymax = 160 to see both parts of curve. You can adjust your Xscl and your Yscl to get less marks. Try 16 for both. |

***REVIEWING FOR MASTERY!***

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

1.)  2.) 

 

3.)  4.) 

 or  

5.)  6.) 

 

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

7.)  8.) 

9.)  10.) 