## 5-3 Graphing Rational Functions Worksheet

Complete the chart below for each rational function. Write NONE where it applies. Must show work!

| Given Function | Reduced Function <br> (rewrite if already done) | Vertical <br> Asymptotes | Horizontal <br> Asymptotes | $x$-intercepts <br> $(x, y)$ | $y$-intercepts <br> $(x, y)$ | Hole <br> $(x, y)$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. $f(x)=\frac{2(x-3)}{(x+4)(x-3)}$ |  |  |  |  |  |  |
| $2 . f(x)=\frac{x+2}{x^{2}-x-2}$ |  |  |  |  |  |  |
| 3. $f(x)=\frac{4 x-8}{x+2}$ |  |  |  |  |  |  |
| $4 . f(x)=\frac{x^{2}+3 x-10}{x-2}$ |  |  |  |  |  |  |
| $5 . f(x)=\frac{2 x^{2}+11 x+12}{2 x^{2}+x-3}$ |  |  |  |  |  |  |

Graph each rational function from the chart above. Remember to draw the asymptotes with a colored pen.


