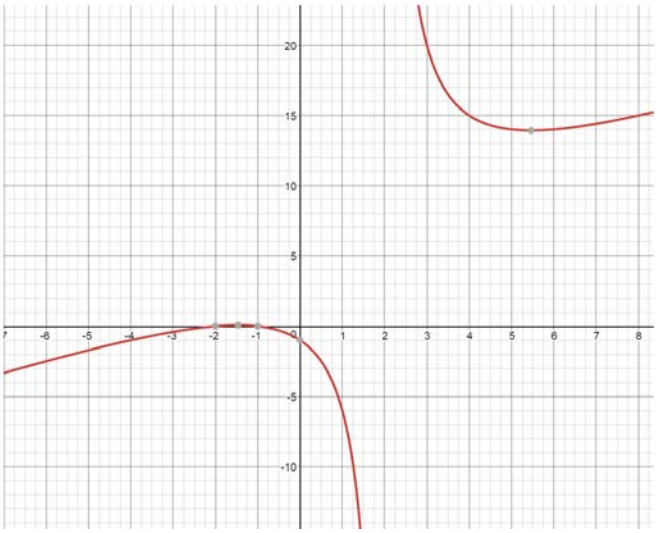
**PreCalculus** **Name**_____

**Notes: 2.7 Graphs of Rational Functions** **Date**_____**Block**_____

**Given:** $f(x) = \dfrac{x^2 + 3x + 2}{x - 2}$ **Find:**




| | |
|---|---|
| *Higher Degree N/D?* | |
| *Asymptotes:* | |
| *hole(s):* | |
| *Domain:* | |
| *Range:* | |
| *x-int (s):* | |
| *y-int:* | |
| *Test Points:* | |

**Characteristics of the Graph of a Rational Function**

End Behavior Asymptote:

*N* > *D*: _____

_____

*N* = *D*: _____

*N* < *D*: _____

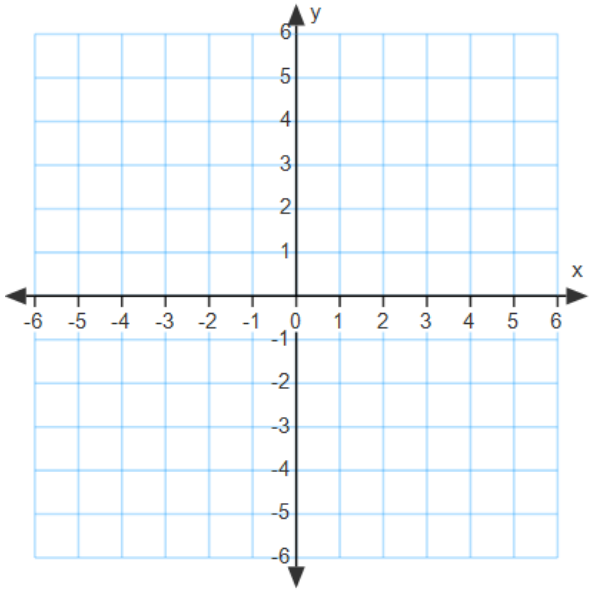
Vertical Asymptotes: _____

*x*-intercepts: _____ *y*-intercepts: _____

**Find the following parts of the function: *x*-intercept, *y*-intercept, all asymptotes, domain, range, and hole(s), if applicable. Notice in each example if *N* > *D*, *N* = *D* or *N* < *D*. Then graph the function.**

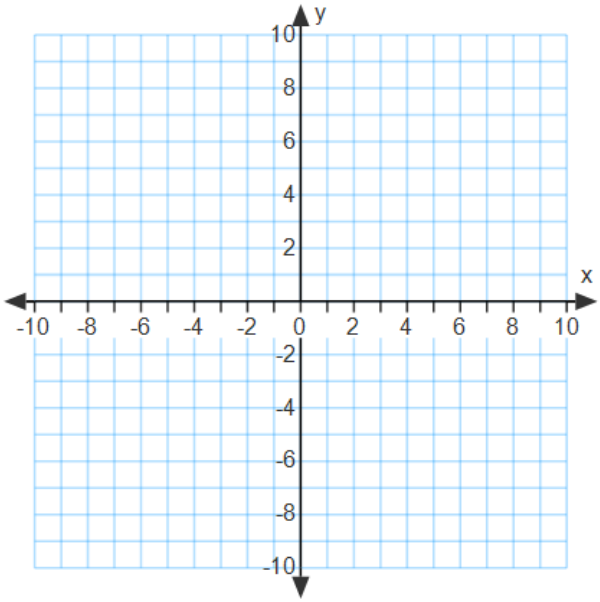
1.)

| | |
|---|---|
| *Higher Degree N/D?* | |
| *Asymptotes:* | |
| *hole(s):* | |
| *Domain:* | |
| *Range:* | |
| *x-int (s):* | |
| *y-int:* | |
| *Test Points:* | |



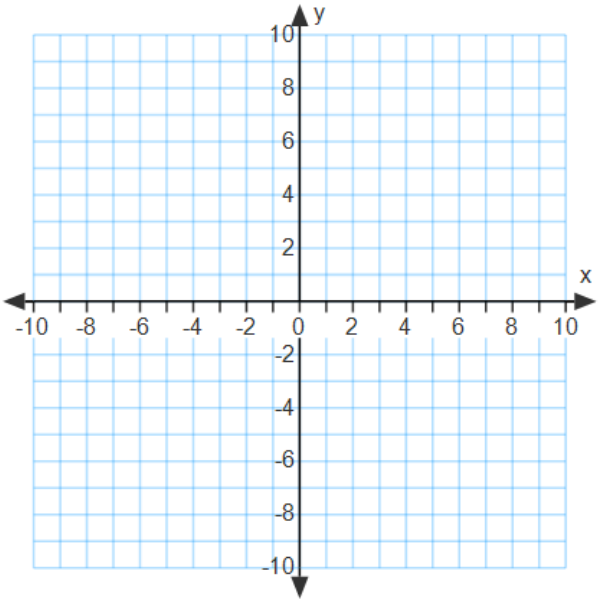

2.)

| | |
|---|---|
| *Higher Degree N/D?* | |
| *Asymptotes:* | |
| *hole(s):* | |
| *Domain:* | |
| *Range:* | |
| *x-int (s):* | |
| *y-int:* | |
| *Test Points:* | |



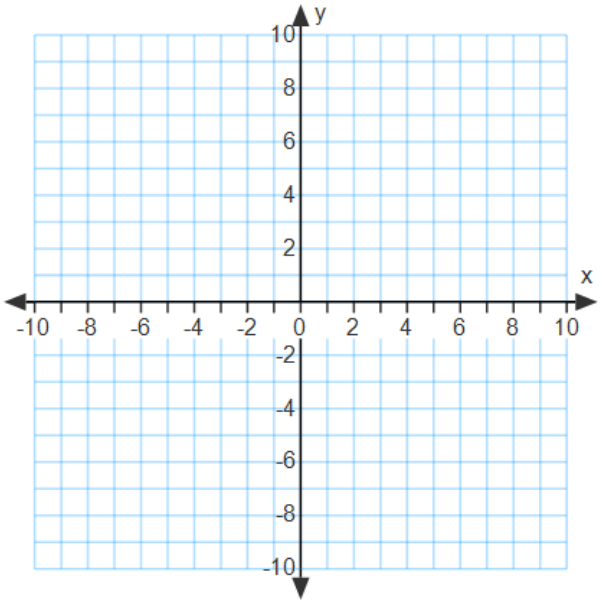
3.)

| | |
|---|---|
| *Higher Degree N/D?* | |
| *Asymptotes:* | |
| *hole(s):* | |
| *Domain:* | |
| *Range:* | |
| *x-int (s):* | |
| *y-int:* | |
| *Test Points:* | |




4.)

| | |
|---|---|
| *Higher Degree N/D?* | |
| *Asymptotes:* | |
| *hole(s):* | |
| *Domain:* | |
| *Range:* | |
| *x-int (s):* | |
| *y-int:* | |
| *Test Points:* | |



5.)

| | |
|---|---|
| *Higher Degree N/D?* | |
| *Asymptotes:* | |
| *hole(s):* | |
| *Domain:* | |
| *Range:* | |
| *x-int (s):* | |
| *y-int:* | |
| *Test Points:* | |