## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label $y$ intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+4}{x-5}$ | $g(x)=\frac{x^{2}-4}{x+5}$ |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote |  |
| $y=x-5$ |  |$\quad$|  | $h(x)=\frac{2 x+10}{x+5}$ |
| :--- | :--- |
| Has HOLE! | $j(x)=\frac{x+4}{x^{2}-25}$ |$\quad$| $k(x)=\frac{7 x+35}{x^{2}-25}$ |
| :--- |
| Has HOLE! |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label y intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x-6}{x+5}$ | $g(x)=\frac{x^{2}-36}{x-8}$ | $h(x)=\frac{3 x-15}{x-5}$ |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote | $y=x+8$ | Has HOLE! | $j(x)=\frac{x+3}{x^{2}-81}$ | $k(x)=\frac{4 x-36}{x^{2}-81}$ |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label $y$ intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+1}{x-5}$ | $g(x)=\frac{x^{2}-4}{x+7}$ | $h(x)=\frac{5 x+10}{x+2}$ |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote |  |  |
| $y=x-7$ |  |  |$\quad$| Has HOLE! | $j(x)=\frac{x+9}{x^{2}-49}$ |
| :--- | :--- |$\quad$| $k(x)=\frac{2 x+12}{x^{2}-36}$ |
| :--- |
| Has HOLE! |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label y intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+6}{x-3}$ | $g(x)=\frac{x^{2}-49}{x-3}$ | $h(x)=\frac{2 x-12}{x-6}$ | $j(x)=\frac{x+5}{x^{2}-25}$ |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote | $y=x+3$ | Has HOLE! | $k(x)=\frac{5 x+20}{x^{2}-16}$ |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label $y$ intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+1}{x-6}$ | $g(x)=\frac{x^{2}-9}{x+8}$ | $h(x)=\frac{3 x+12}{x+4}$ |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote |  |  |
| $y=x-8$ |  |  |$\quad$ Has HOLE! $\quad j(x)=\frac{x-7}{x^{2}-64} \quad$| Has HOLE! |
| :--- |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label y intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+7}{x-2}$ | $g(x)=\frac{x^{2}-49}{x-3}$ <br> Slant asymptote $y=x+3$ | $h(x)=\frac{4 x+20}{x+5}$ <br> Has HOLE! | $j(x)=\frac{x+6}{x^{2}-64}$ | $k(x)=\frac{3 x+24}{x^{2}-64}$ <br> Has HOLE! |
| :---: | :---: | :---: | :---: | :---: |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label $y$ intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+3}{x-6}$ | $g(x)=\frac{x^{2}-36}{x+9}$ | $h(x)=\frac{6 x-18}{x-3}$ |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote |  |  |
| $y=x-9$ |  |  |$\quad$| Has HOLE! | $j(x)=\frac{x-7}{x^{2}-25}$ |
| :--- | :--- |$\quad$| $k(x)=\frac{2 x+18}{x^{2}-81}$ |
| :--- |
| Has HOLE! |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label y intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+1}{x-7}$ | $g(x)=\frac{x^{2}-25}{x-6}$ | $h(x)=\frac{3 x-21}{x-7}$ |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote |  |  |
| $y=x+6$ |  |  |$\quad$| Has HOLE! | $j(x)=\frac{x+6}{x^{2}-16}$ |
| :--- | :--- |$\quad$| $k(x)=\frac{3 x+15}{x^{2}-25}$ |
| :--- |
| Has HOLE! |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label $y$ intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+4}{x-1}$ | $g(x)=\frac{x^{2}-1}{x-9}$ | $h(x)=\frac{4 x+28}{x+7}$ |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote |  |  |
| $y=x+9$ |  |  |$\quad$ Has HOLE! $\quad j(x)=\frac{x+8}{x^{2}-25} \quad$| Has HOLE! |
| :--- |

## Partner Desmos Assignment

1. Graph and label each of the rational functions using Desmos
a. Label $x$ intercept(s) with a point and a coordinate
b. Label y intercept with a point and a coordinate
c. Label vertical asymptotes with red dotted lines
d. Label horizontal asymptotes with green dotted lines
e. Label holes with a point and a coordinate
f. Label points on graph -10 to 10
2. The slant asymptote is given for the functions that it applies to, but it is expected that you can determine the horizontal asymptotes and the vertical asymptotes
3. Send an email with the graphs attached as links to shad.hickman @psd150.org
4. BE SURE to put your names IN the document itself

There is a video showing how to do each of these types of graphs on Mr. Hickman's website under the AP calculus tab

| $f(x)=\frac{x+2}{x-8}$ | $g(x)=\frac{x^{2}-16}{x-8}$ | $h(x)=\frac{5 x+35}{x+7}$ |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Slant asymptote | $y=x+8$ | Has HOLE! | $j(x)=\frac{x-7}{x^{2}-25}$ | $k(x)=\frac{4 x-100}{x^{2}-25}$ |

