HW 5-2 Graphing Transformations

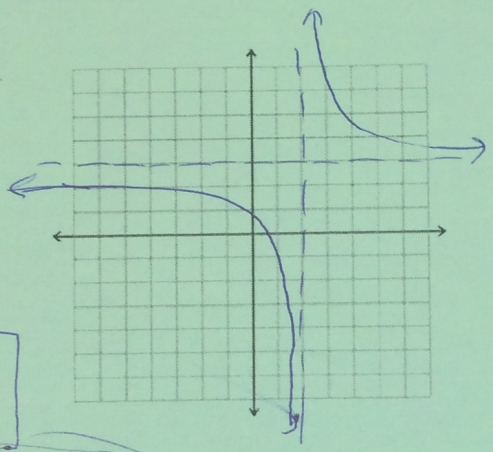
Name_____

Secondary 3

Period_____

Rewrite the function in the form $f(x) = q(x) + \frac{r(x)}{d(x)}$, then write the transformations from its parent function and sketch a complete graph of f(x).

1. $f(x) = \frac{3x+1}{x-2}$

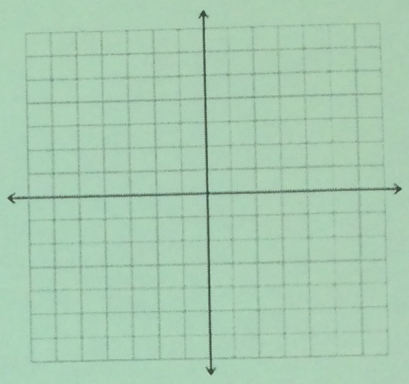


+2 | 3 1
↓ 6
3 | 7

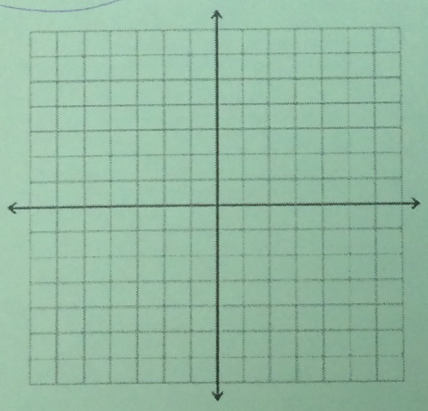
$f(x) = \frac{7}{(x-2)} + 3$

Transformations:
- V. Stretch by 7
- Shift Right by 2
- Shift Up by 3

2. $g(x) = \frac{x+2}{x-1}$



3. $h(x) = \frac{x-1}{x+1}$



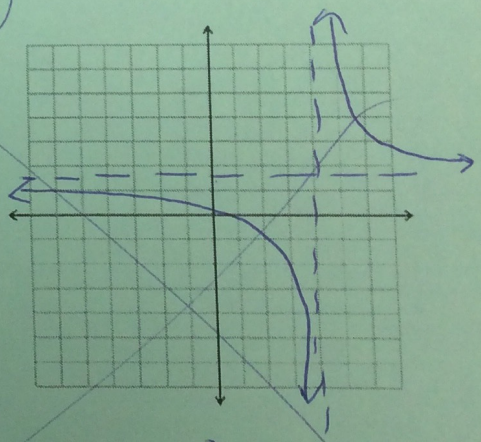
Skip

4. $j(x) = \frac{3x+6}{2x-4}$

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

$= \frac{3/2\,(x+6)}{(x-4)}$

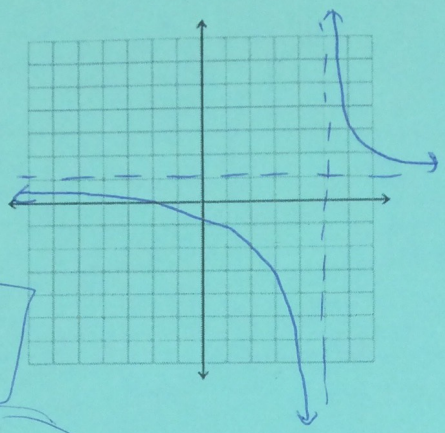
4 | 1 6
↓ 4
1 | 10



$j(x) = \frac{3/2\,10}{(x-4)} + \frac{3}{2}\cdot 1 =$

$\frac{15}{(x-4)} + 3/2$

7. $f(x)=\frac{x-7}{x-5}$

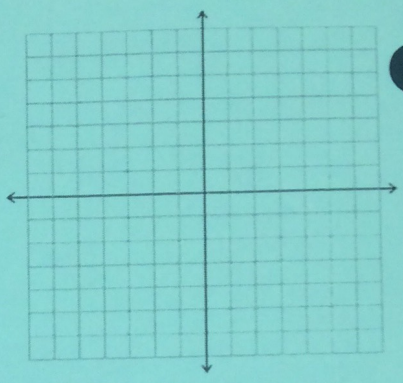


5 | 1 | 7
↓ | 5
1 | 12

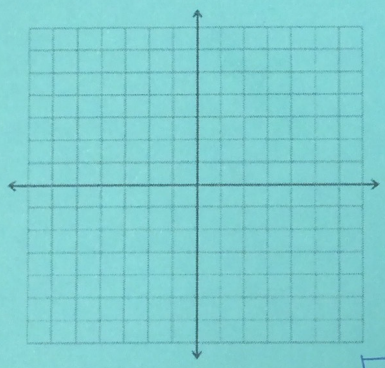
$f(x)=\frac{12}{(x-5)}+1$

Transformations
- V. Stretch by 12
- Shift Right by 5
- Shift Up by 1

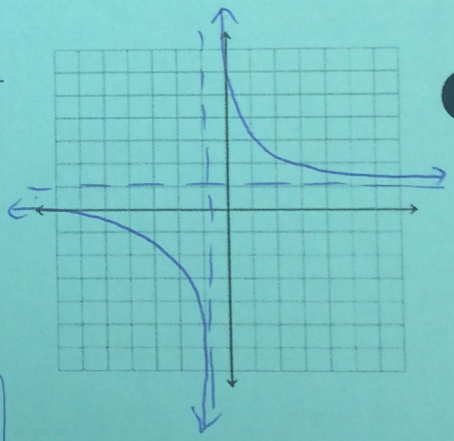
8. $f(x)=\frac{3x+5}{x+2}$



9. $f(x)=\frac{x-1}{x+1}$



10. $f(x)=\frac{x+5}{x+1}$



-1 | 1 | 5
↓ | -1
1 | 4

$f(x)=\frac{4}{(x+1)}+1$

Transformations:
- V. Stretch by 4
- Shift Left 1
- Shift Up 1