Graphing Rational Functions - WKST 2 (Revised)

I. Sketch the graph of each function.

1. $g(x)=\dfrac{5x}{2x+3}$

2. $h(x)=\dfrac{2x}{x^2-9}$

3. $f(x)=\dfrac{x^2}{x-1}$

4. $y=\dfrac{2x^2}{x^2-9}$

5. $y=\dfrac{2x^2-x-10}{x+2}$

6. $g(x)=\dfrac{6}{x^2+1}$

7. $y=\dfrac{x-6}{x^2-36}$

II. State the domain. Then use a graphing calculator to find the range.

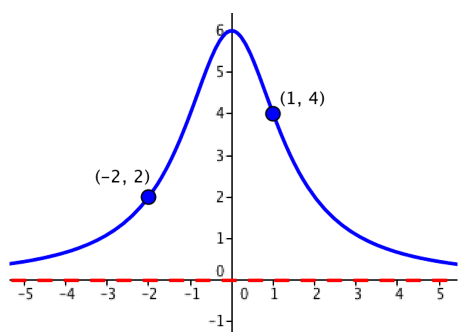
8. $y=\dfrac{3x^2}{x^2-9}$

9. $f(x)=\dfrac{x^2-2x}{2x+3}$

10. $y=\dfrac{3x^2+10x-8}{x^2+4}$

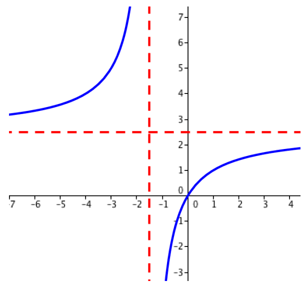
III The graph of a function in the form $f(x)=\dfrac{a}{x^2+b}$ is shown.
Find the values of a and b.

11.



ANSWERS

1.



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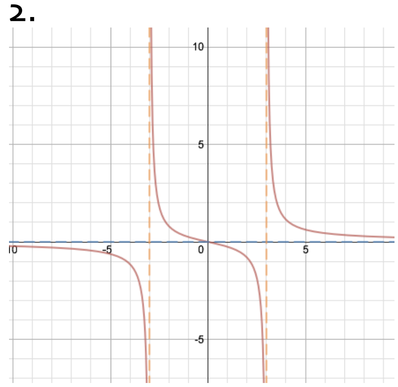

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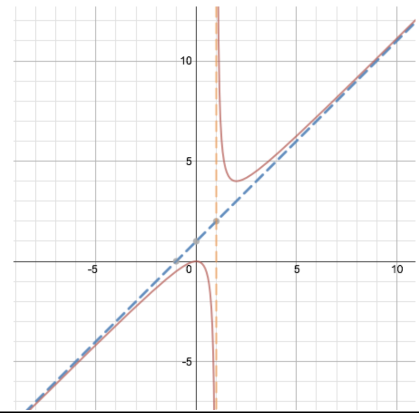

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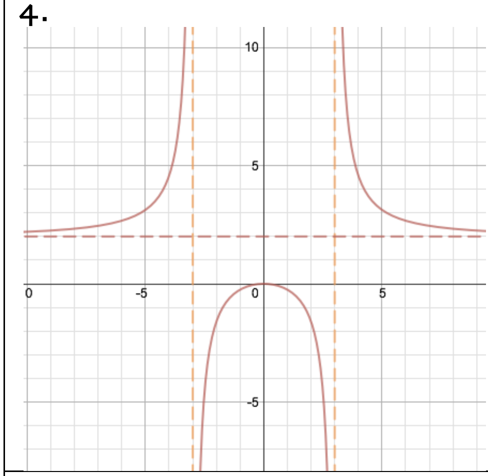

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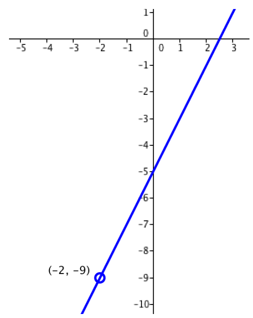

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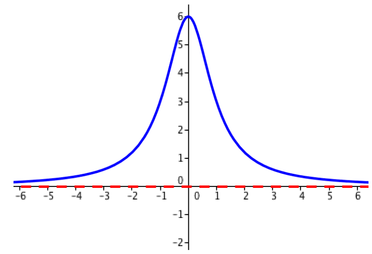

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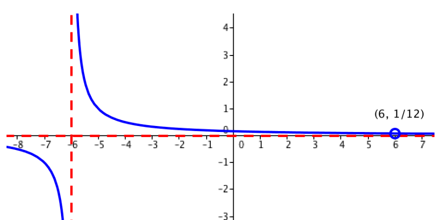

8.
$\{x | x \neq \pm 3\}$

$\{y | y \leq 0 \text{ or } y > 3\}$

9.
$\left\{x \middle| x \neq -\frac{3}{2}\right\}$

$\{y | y \leq -4.791 \text{ or } y \geq -0.209\}$

10.
$\{x | x \in R\}$

$\{y | -3.036 \leq y \leq 4.036\}$

11.
a=12,
b=2