Name _____ **Date** _____ **Period** _____

7.2 Graphing Rational Functions DAY ONE CYU

☑ Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

H Use when you could do it alone with a little help from teacher or peer

G Use when you completed the problem in a group

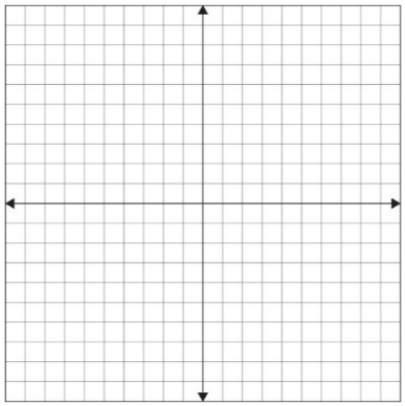
X Use when a question was attempted but wrong (get help)

N Use when a question was not even attempted

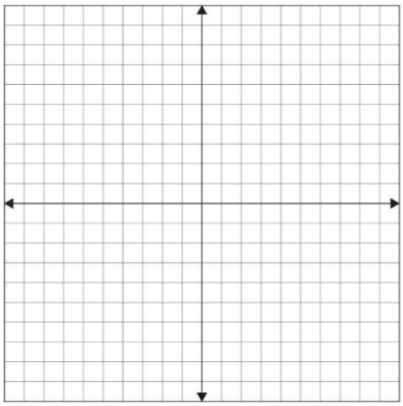
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Graphing rational functions	1	2, 7, 9 - 12	3, 8
Describing transformations	1	2, 9 – 12	3
Vertical asymptote	4	5, 9 – 12	6
Horizontal asymptote	4	5, 9 – 12	6
Domain & range in interval notation	4, 13 - 16	5	6
Error Analysis		7	8
Analyzing Relationships		9 - 12	

Graph the function. Compare the graph with the parent function: $f(x) = \frac{1}{x}$.

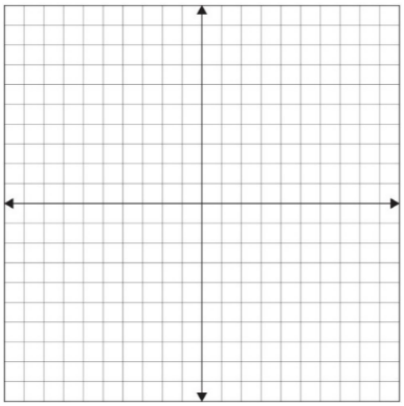
1. $g(x) = \frac{-5}{x}$



2. $g(x) = \frac{-12}{x}$

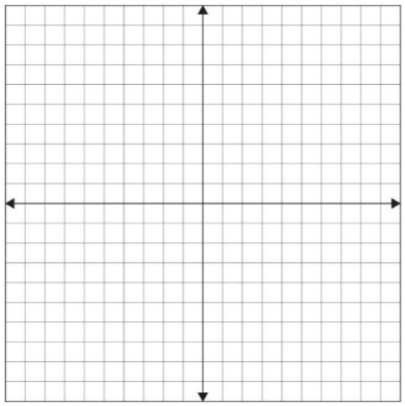


3. $g(x) = \frac{0.1}{x}$

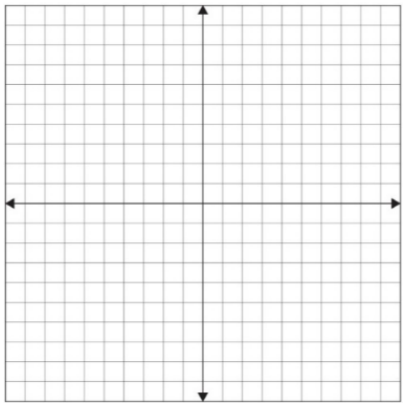


Graph the function. State the vertical and horizontal asymptotes. Finally state the domain and range in interval notation.

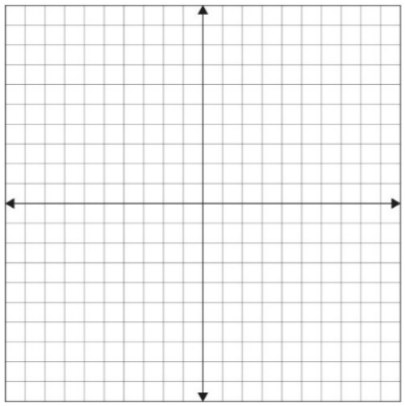
4. $g(x) = \frac{4}{x} + 3$



5. $f(x) = \frac{-2}{x-7}$

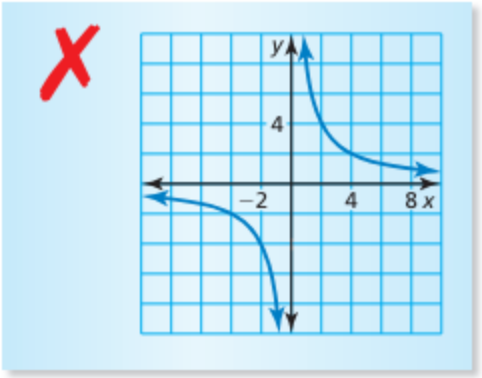


6. $y = \frac{10}{x+7} - 5$

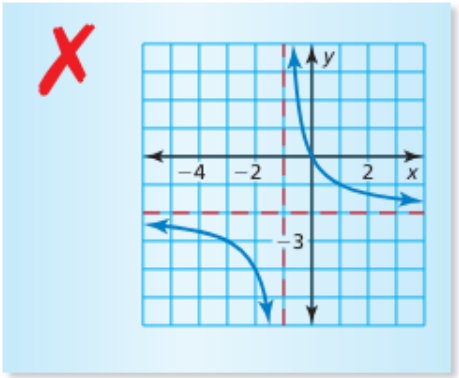


ERROR ANALYSIS: Describe and correct the error in graphing the rational function.

7. $y = \frac{-8}{x}$



8. $y = \frac{2}{x-1} - 2$



ANALYZING RELATIONSHIPS: *Match the function with its graph. Explain your reasoning.*

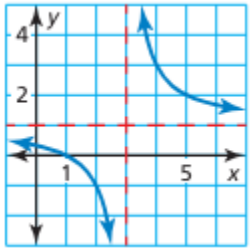
9. $g(x) = \frac{2}{x-3} + 1$

10. $h(x) = \frac{2}{x+3} + 1$

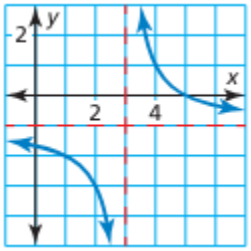
11. $f(x) = \frac{2}{x-3} - 1$

12. $y = \frac{2}{x+3} - 1$

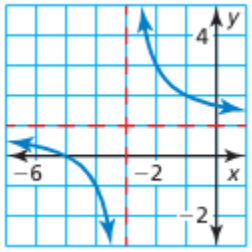
A.



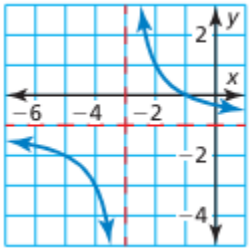
B.



C.



D.



DOMAIN AND RANGE: State the domain and range for each graph above in interval notation.

13. Graph A

14. Graph B

15. Graph C

16. Graph D

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.