

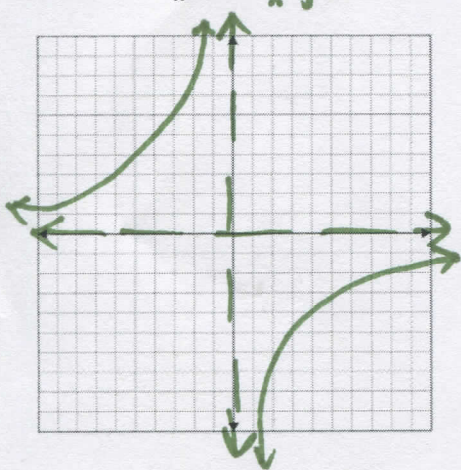
7.2 Graphing Rational Functions DAY ONE CYU

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

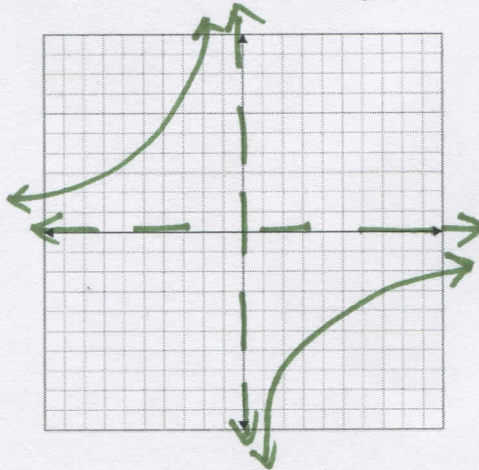
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Graphing rational functions	1	2, 7, 9 - 12	3, 8
Describing transformations	1	2, 9 - 12	3
Vertical asymptote	4	5, 9 - 12	6
Horizontal asymptote	4	5, 9 - 12	6
Domain & range in interval notation	4, 13 - 16	5	6
Error Analysis		7	8
Analyzing Relationships		9 - 12	

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

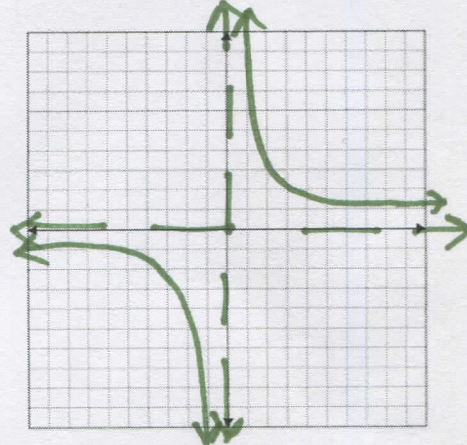
1. $g(x) = \frac{-5}{x}$ *R_x; VS 5*



2. $g(x) = \frac{-12}{x}$ *R_x; VS 12*

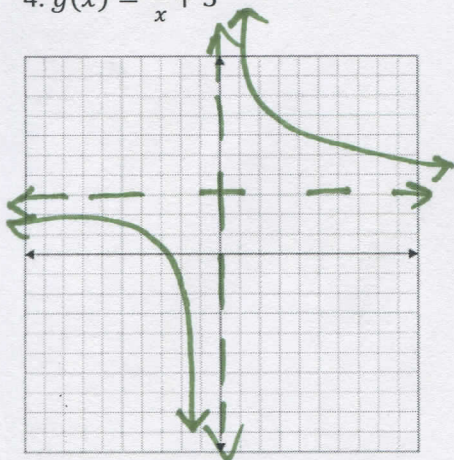


3. $g(x) = \frac{0.1}{x}$

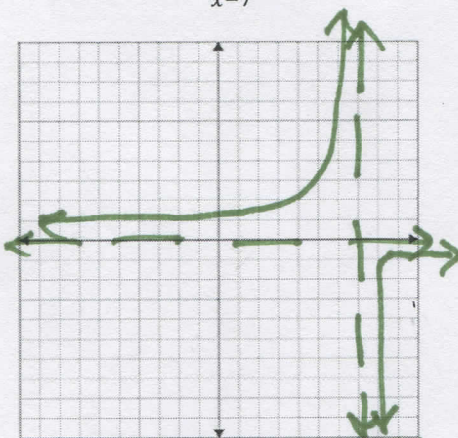


Graph the function. State the vertical and horizontal asymptotes. Finally state the domain and range in interval notation.

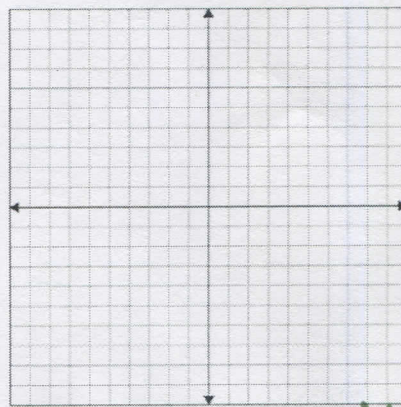
4. $g(x) = \frac{4}{x} + 3$



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



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



VA: $x=0$ D: $(-\infty, 0) \cup (0, \infty)$
 HA: $y=3$ R: $(-\infty, 3) \cup (3, \infty)$

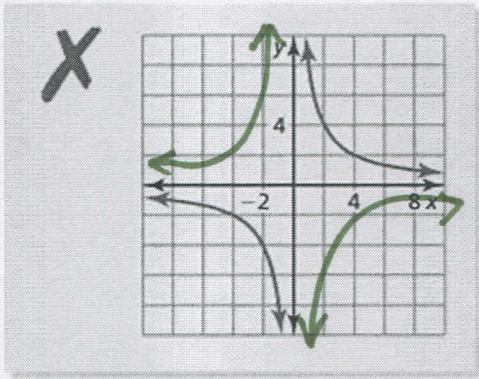
VA: $x=7$ D: $(-\infty, 7) \cup (7, \infty)$
 HA: $y=0$ R: $(-\infty, 0) \cup (0, \infty)$

VA: $x=-7$ D: $(-\infty, -7) \cup (-7, \infty)$
 HA: $y=-5$ R: $(-\infty, -5) \cup (-5, \infty)$

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

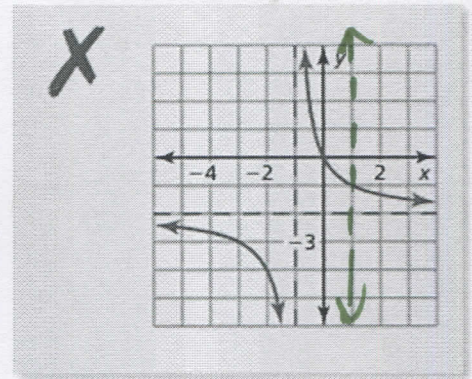
7. $y = \frac{-8}{x}$

R_x



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

$\rightarrow |u$
 $VA: x=1$



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

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

A

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

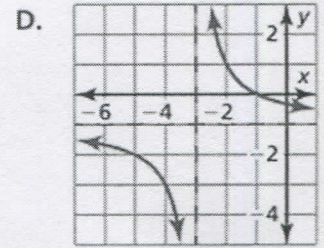
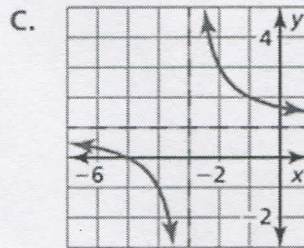
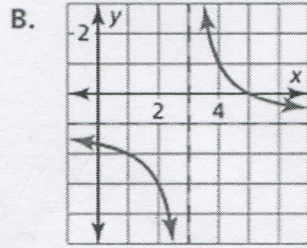
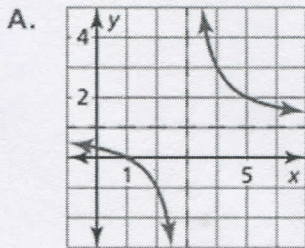
C

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

B

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

D



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

13. Graph A

$VA: x=3$ $HA: y=1$
 $D: (-\infty, 3) \cup (3, \infty)$
 $R: (-\infty, 1) \cup (1, \infty)$

14. Graph B

$VA: x=3$ $HA: y=-1$
 $D: (-\infty, 3) \cup (3, \infty)$
 $R: (-\infty, -1) \cup (-1, \infty)$

15. Graph C

$VA: x=-3$ $HA: y=1$
 $D: (-\infty, -3) \cup (-3, \infty)$
 $R: (-\infty, 1) \cup (1, \infty)$

16. Graph D

$VA: x=-3$ $HA: y=-1$
 $D: (-\infty, -3) \cup (-3, \infty)$
 $R: (-\infty, -1) \cup (-1, \infty)$

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.

