

Get Ready for the Lesson

Read the introduction to Lesson 8-3 in your textbook.

- If 15 students contribute to the gift, how much would each of them pay?
- If each student pays \$5, how many students contributed?

Read the Lesson

1. Which of the following are rational functions?

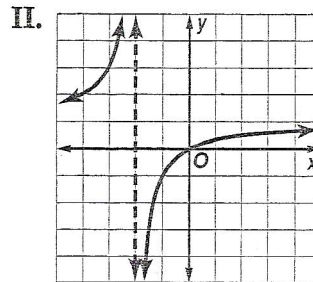
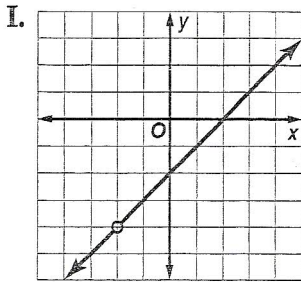
A. $f(x) = \frac{1}{x-5}$

B. $g(x) = \sqrt{x}$

C. $h(x) = \frac{x^2 - 25}{x^2 + 6x + 9}$

2. a. Graphs of rational functions may have breaks in _____. These may occur as vertical _____ or as point _____. The _____ of a rational function is limited to values for which the function is defined.

b. The graphs of two rational functions are shown below.



Graph I has a _____ at $x =$ _____.

Graph II has a _____ at $x =$ _____.

Match each function with its graph above.

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

$g(x) = \frac{x^2 - 4}{x + 2}$

Remember What You Learned

3. One way to remember something new is to see how it is related to something you already know. How can knowing that division by zero is undefined help you to remember how to find the places where a rational function has a point discontinuity or an asymptote?