

Name _____

2-4 Lesson Master

Questions on SPUR Objectives
See Student Edition pages 142–145 for objectives.

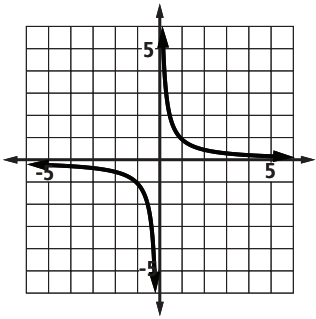
PROPERTIES Objective I

1. Describe the end behavior of the function k with $k(x) = ax^n$ when
- a. $a > 0$ and n is odd. _____
- _____
- b. $a < 0$ and n is even. _____
- _____
2. Describe the end behavior of a function mapping the number of tosses of a fair six-sided die onto the relative frequency of an outcome of 4.
- _____
3. Give equations for any horizontal asymptotes of the function with the given equation.
- a. $p(z) = 2z + 1$ _____ b. $q(y) = \frac{\cos(y)}{y^2}$ _____
4. Give an equation for a power function with end behavior similar to j with $j(x) = \frac{10}{x^3} - \frac{x^2}{3}$.
- _____

REPRESENTATIONS Objective H

In 5 and 6, refer to the graph of $f(x) = \frac{1}{x}$ at the right.

5. a. What is $\lim_{x \rightarrow \infty} f(x)$? _____
- b. What is $\lim_{x \rightarrow -\infty} f(x)$? _____
6. Is f even, odd, or neither? Justify your answer. _____
- _____

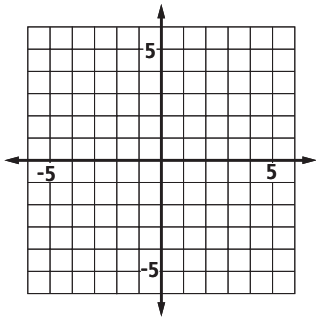


7. On the axes at the right, sketch a graph of a function g that satisfies the following conditions:

$\lim_{x \rightarrow \infty} g(x) = 3$

$\lim_{x \rightarrow -\infty} g(x) = -4$

g increases over its entire domain,
which is the set of all real numbers.



Copyright © Wright Group/McGraw-Hill