1. What is the domain of \( f(x) \)?
2. What is the range of \( f(x) \)?
3. What are the \( x \) intercepts?
4. For what \( x \) does \( f(x) = 0 \)?
5. Give intervals (for \( x \)) such that \( f(x) > 0 \)
6. Give intervals (for \( x \)) such that \( f(x) < 0 \)
7. Find \( f(0) \)
8. Find \( f(-3) \)
9. Is \( f(-6) \) positive or negative?
10. For what value(s) of \( x \) does \( f(x) = 4 \)?

11. What is the domain of \( g(x) \)?
12. What is the range of \( g(x) \)?
13. What are the \( x \) intercepts?
14. For what \( x \) does \( g(x) = 0 \)?
15. Give intervals (for \( x \)) such that \( g(x) > 0 \)
16. Give intervals (for \( x \)) such that \( g(x) < 0 \)
17. Find \( g(0) \)
18. Find \( g(4) \)
19. Is \( g(1) \) positive or negative?
20. For what value(s) of \( x \) does \( g(x) = 2 \)?

Answer the following questions for the function \( h(x) = \frac{4x}{x^2 - 25} \):

21. Is the point \((0, 0)\) on the graph of \( h(x) \)?
22. What is the domain of \( h(x) \)?
23. Find \( h(-1) \).
24. For what value(s) of \( x \) does \( h(x) = 0 \)?
25. If \( h(x) = -\frac{3}{4} \), what is \( x \)?

(revised 8/08)
1. \((-\infty, 6]\) \(\{x \mid x \leq 6\}\)
2. \([-4, \infty)\) \(\{y \mid y \geq -4\}\)
3. \((-5, 0) \ (-1, 0) \ (5, 0)\)
4. \(x = -5, \ -1, \ 5\)
5. \((-\infty, -5) \cup (-1, 5)\)
6. \((-5, -1) \cup (5, 6]\)
7. \(f(0) = 2\)
8. \(f(-3) = -4\)
9. \text{positive}\)
10. \(x = -6, \ 2\)
11. \((-\infty, -3) \cup (-3, \infty)\) \(\{x \mid x \neq -3\}\)
12. \((-\infty, \infty)\) \(\{y \mid y \in \mathbb{R}\}\)
13. \((-1, 0) \ (3, 0) \ (6, 0)\)
14. \(x = -1, \ 3, \ 6\)
15. \((-\infty, -3) \cup (-3, -1) \cup (3, 6)\)
16. \((-1, 3) \cup (6, \infty)\)
17. \(g(0) = -1\)
18. \(g(4) = 1\)
19. \text{negative}\)
20. \(x = -4, \ -2, \ 5\)

21. \text{Yes}\)
22. \((-\infty, -5) \cup (-5, 5) \cup (5, \infty)\) \(\{x \mid x \neq \pm 5\}\)
23. \(h(-1) = \frac{1}{6}\)
24. \(x = 0\)
25. \(x = -\frac{25}{3}, \ 3\)

(revised 8/08)