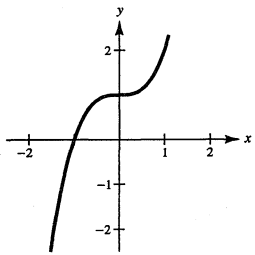
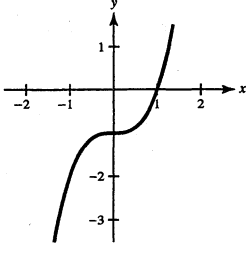
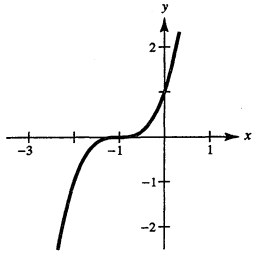
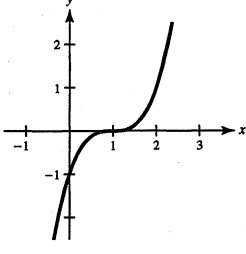


## Test Form A

Name \_\_\_\_\_ Date \_\_\_\_\_

## Chapter P

Class \_\_\_\_\_ Section \_\_\_\_\_

1. Find all intercepts of the graph of  $y = \frac{x+2}{x-3}$ .
- (a)  $(-2, 0)$  (b)  $(-2, 0), (3, 0)$  (c)  $(0, \frac{2}{3}), (3, 0)$   
 (d)  $(-2, 0), (0, -\frac{2}{3})$  (e) None of these
2. Determine if the graph of  $y = \frac{x}{x^2 - 4}$  is symmetrical with respect to the  $x$ -axis, the  $y$ -axis, or the origin.
- (a) About the  $x$ -axis (b) About the  $y$ -axis (c) About the origin  
 (d) All of these (e) None of these
3. Find all points of intersection of the graphs of  $x^2 - 2x - y = 6$  and  $x - y = -4$ .
- (a)  $(0, -6), (0, 4)$  (b)  $(10, 14), (13, 17)$  (c)  $(5, 9), (-2, 2)$   
 (d)  $(-5, -1), (2, 6)$  (e) None of these
4. Which of the following is a sketch of the graph of the function  $y = x^3 + 1$ ?
- (a) 
- (b) 
- (c) 
- (d) 
- (e) None of these
5. Find an equation for the line passing through the point  $(4, -1)$  and perpendicular to the line  $2x - 3y = 3$ .
- (a)  $y = \frac{2}{3}x - 1$  (b)  $3x + 2y + 2 = 0$  (c)  $2x + 3y = 10$   
 (d)  $3x + 2y = 10$  (e) None of these

6. Find the domain of  $f(x) = \frac{1}{\sqrt{3-2x}}$ .

- (a)  $(-\infty, \frac{3}{2})$                       (b)  $[\frac{3}{2}, \infty)$                       (c)  $(\frac{3}{2}, \infty)$   
 (d)  $(-\infty, \frac{3}{2}) \cup (\frac{3}{2}, \infty)$                       (e) None of these

7. Find  $f(x + \Delta x)$  for  $f(x) = x^3 + 1$ .

- (a)  $x^3 + 1 + \Delta x$                       (b)  $x^3 + 3x^2(\Delta x) + 3x(\Delta x)^2 + (\Delta x)^3 + 1$   
 (c)  $x^3 + (\Delta x)^3 + 1$                       (d)  $\Delta^3 x^6 + 1$   
 (e) None of these

8. If  $f(x) = \frac{1}{\sqrt{x}}$  and  $g(x) = 1 - x^2$ , find  $f(g(x))$ .

- (a)  $\frac{1-x^2}{\sqrt{x}}$                       (b)  $\frac{1}{\sqrt{1-x^2}}$                       (c)  $1 - \frac{1}{x}$   
 (d)  $\frac{1}{\sqrt{x}} + 1 - x^2$                       (e) None of these

9. If the point  $(-3, \frac{1}{2})$  lies on the graph of the equation  $2x + ky = -11$ , find the value of  $k$ .

- (a)  $-\frac{5}{2}$                       (b)  $-34$                       (c)  $-\frac{17}{2}$   
 (d)  $-10$                       (e) None of these

10. Which of the following equations expresses  $y$  as a function of  $x$ ?

- (a)  $3y + 2x - 9 = 17$                       (b)  $2x^2y + x = 4y$                       (c) Both a and b  
 (d) Neither a nor b                      (e)  $3y^2 - x^2 = 5$

11. Given  $f(x) = x^2 - 3x + 4$ , find  $f(x + 2) - f(2)$ .

- (a)  $x^2 - 3x + 4$                       (b)  $x^2 + x$                       (c)  $x^2 + x - 8$   
 (d)  $x^2 - 3x - 4$                       (e) None of these

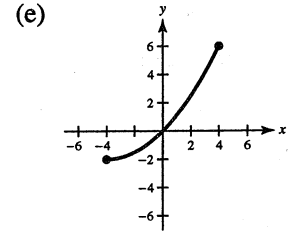
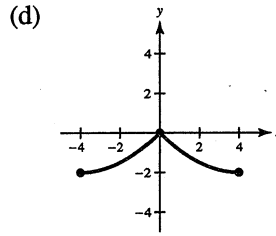
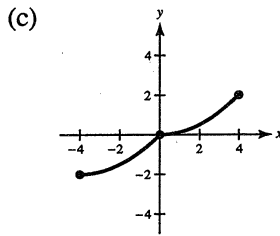
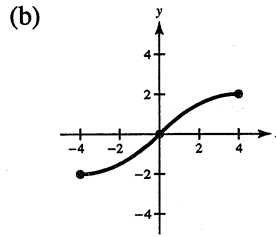
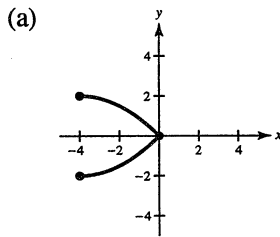
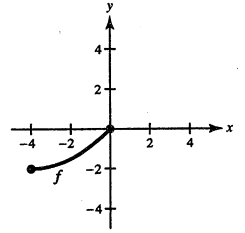
12. Determine which function is neither even nor odd.

- (a)  $f(x) = \tan x$                       (b)  $f(x) = 3x^5 + 5x^3 + 1$                       (c)  $f(x) = \frac{3}{x^2}$   
 (d)  $f(x) = \sqrt{x^2 + 1}$                       (e) Both a and b

13. Find the point that lies on the line determined by the points  $(1, -2)$  and  $(-3, 1)$ .

- (a)  $(0, 0)$                       (b)  $(5, 1)$                       (c)  $(4, -6)$   
 (d)  $(5, -5)$                       (e)  $(-2, 0)$

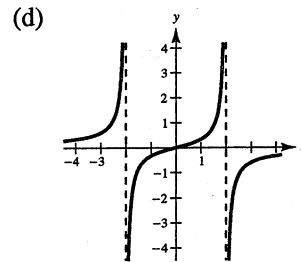
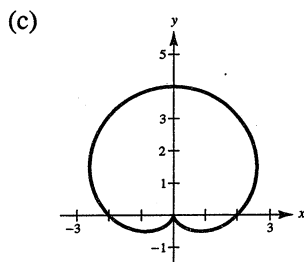
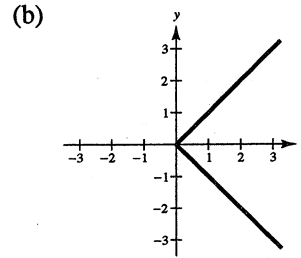
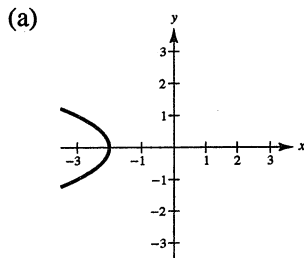
14. The domain of the function  $f$  shown in the figure is  $-4 \leq x \leq 4$ . Choose the complete graph of  $f$  if  $f$  is even.



15. Describe the transformation needed to sketch the graph of  $y = \frac{1}{x-2}$  using the graph of  $f(x) = \frac{1}{x}$ .

- (a) Shift  $f(x)$  two units to the right.
- (b) Shift  $f(x)$  two units to the left.
- (c) Shift  $f(x)$  two units upward.
- (d) Shift  $f(x)$  two units downward.
- (e) Reflect  $f(x)$  about the  $x$ -axis.

16. Use the vertical line test to determine which of the following graphs represent  $y$  as a function of  $x$ .



- (e) None of these