 DJM

Test Form A
Chapter P

Name _____ **Date** _____

Class _____ **Section** _____

1. Find all intercepts of the graph of $y = \dfrac{x+2}{x-3}$.

(a) $(-2, 0)$ (b) $(-2, 0), (3, 0)$ (c) $\left(0, \frac{2}{3}\right), (3, 0)$

(d) $(-2, 0), \left(0, -\frac{2}{3}\right)$ (e) None of these

2. Determine if the graph of $y = \dfrac{x}{x^2-4}$ 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

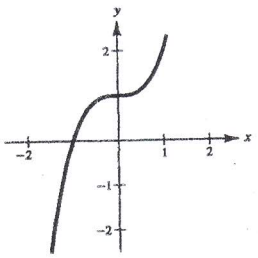
3. Find all points of intersection of the graphs of $x^2 - 2x - y = 6$ and $x - y = -4$.

(a) $(0, -6), (0, 4)$ (b) $(10, 14), (13, 17)$ (c) $(5, 9), (-2, 2)$

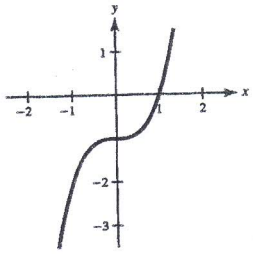
(d) $(-5, -1), (2, 6)$ (e) None of these

4. Which of the following is a sketch of the graph of the function $y = x^3 + 1$?

(a)



(b)



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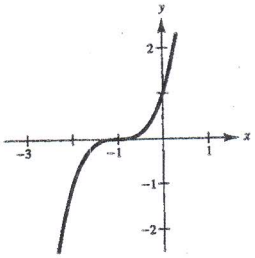
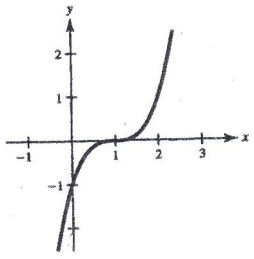


(d)



(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 $f(x) = \dfrac{1}{\sqrt{3 - 2x}}$.

(a) $\left(-\infty, \frac{3}{2}\right)$ (b) $\left[\frac{3}{2}, \infty\right)$ (c) $\left(\frac{3}{2}, \infty\right)$

(d) $\left(-\infty, \frac{3}{2}\right) \cup \left(\frac{3}{2}, \infty\right)$ (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 $f(x) = \dfrac{1}{\sqrt{x}}$ and $g(x) = 1 - x^2$, find $f(g(x))$.

(a) $\dfrac{1 - x^2}{\sqrt{x}}$ (b) $\dfrac{1}{\sqrt{1 - x^2}}$ (c) $1 - \dfrac{1}{x}$

(d) $\dfrac{1}{\sqrt{x}} + 1 - x^2$ (e) None of these

9. If the point $\left(-3, \frac{1}{2}\right)$ 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) $f(x) = \dfrac{3}{x^2}$

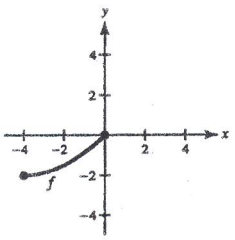
(d) $f(x) = \sqrt{x^2 + 1}$ (e) Both **a** and **b**

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

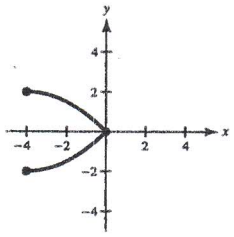
(a) $(0, 0)$ (b) $(5, 1)$ (c) $(4, -6)$

(d) $(5, -5)$ (e) $(-2, 0)$

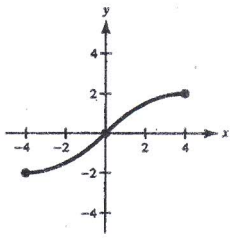
14. The domain of the function f shown in the figure is $-4 \le x \le 4$. Choose the complete graph of f if f is even.



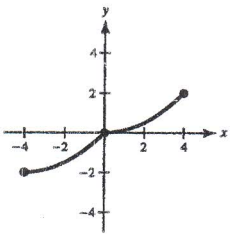
(a)



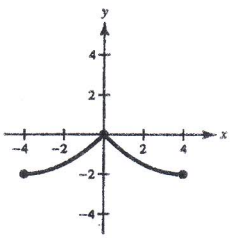
(b)



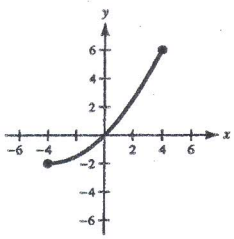
(c)



(d)



(e)



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

(a) Shift $f(x)$ two units to the right.

(b) Shift $f(x)$ two units to the left.

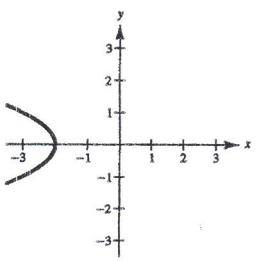
(c) Shift $f(x)$ two units upward.

(d) Shift $f(x)$ two units downward.

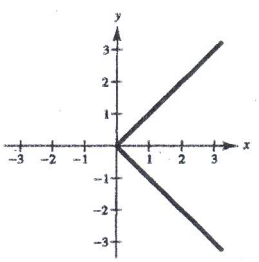
(e) Reflect $f(x)$ about the x-axis.

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

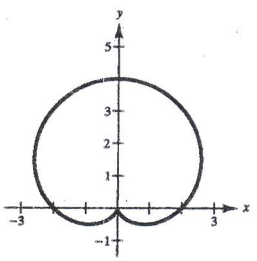
(a)



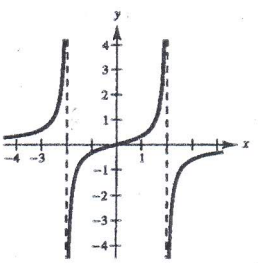
(b)



(c)



(d)



(e) None of these

17. Let $f(x) = \begin{cases} \frac{1}{x}, & x < 0 \\ 2x + 1, & x \geq 0 \end{cases}$. Find $f(3)$.

(a) $\frac{1}{3}$ (b) 1 (c) 7

(d) Undefined (e) $\frac{22}{3}$

18. The dollar value of a product in 1998 is \$1430. The value of the product is expected to increase \$83 per year for the next 5 years. Write a linear equation that gives the dollar value V of the product in terms of the year t. (Let $t = 8$ represent 1998.)

(a) $V = 1430 + 83(t - 8)$ (b) $V = 83 + 1430t$ (c) $V = 1430 + 83t$

(d) $V = 83 + 1430(t + 8)$ (e) $V = 1430 + 83(t + 8)$

19. During the first and second quarters of the year, a business had sales of \$150,000 and \$185,000, respectively. If the growth of sales follows a linear pattern, what will sales be during the fourth quarter?

(a) \$220,000 (b) \$235,000 (c) \$335,000

(d) \$255,000 (e) None of these

20. In order for a company to realize a profit in the manufacture and sale of a certain item, the revenue, R, for selling x items must be greater than the cost, C, of producing x items. If $R = 79.99x$ and $C = 61x + 1050$, for what values of x will this product return a profit?

(a) $x \geq 55$ (b) $x \geq 8$ (c) $x \geq 18$

(d) $x \geq 56$ (e) None of these

DJM

Test Form B **Name** _____ **Date** _____

Chapter P **Class** _____ **Section** _____

1. Find all intercepts of the graph of $y = \dfrac{x-1}{x+3}$.

(a) $(1, 0), \left(0, -\frac{1}{3}\right)$ (b) $(1, 0)$ (c) $(-3, 0), (1, 0)$

(d) $(-3, 0), \left(0, -\frac{1}{3}\right)$ (e) None of these

2. Determine if the graph of $y = \dfrac{x^2}{x^2 - 4}$ 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

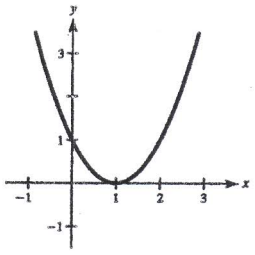
3. Find all points of intersection of the graphs of $x^2 + 3x - y = 3$ and $x + y = 2$.

(a) $(5, -3), (1, 1)$ (b) $(0, -3), (0, 2)$ (c) $(-5, -3), (1, 1)$

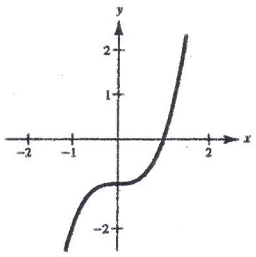
(d) $(-5, 7), (1, 1)$ (e) None of these

4. Which of the following is a sketch of the graph of the function $y = (x - 1)^3$?

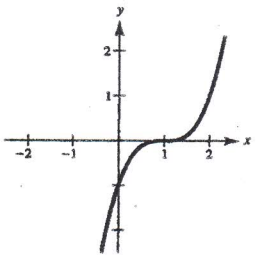
(a)



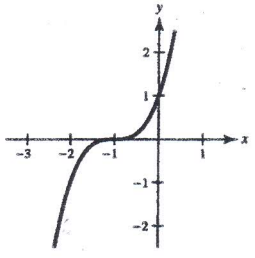
(b)



(c)



(d)



(e) None of these

5. Find an equation for the line passing through the point $(4, -1)$ and parallel to the line $2x - 3y = 3$.

(a) $2x - 3y = 11$ (b) $2x - 3y = -5$ (c) $3x - 2y = -5$

(d) $y = \frac{2}{3}x - 1$ (e) None of these

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

(a) $\left(-\infty, -\frac{3}{2}\right)$ (b) $\left[-\frac{3}{2}, \infty\right)$ (c) $\left(-\frac{3}{2}, \infty\right)$

(d) $\left(-\infty, -\frac{3}{2}\right) \cup \left(-\frac{3}{2}, \infty\right)$ (e) None of these

7. Find $f(x + \Delta x)$ for $f(x) = x^2 - 2x - 3$.

(a) $x^2 - x - 3 + \Delta x$ (b) $x^2 + 2x(\Delta x) + (\Delta x)^2 - 2x - 2\Delta x - 3$

(c) $x^2 - 2x - 3 + \Delta x$ (d) 5

(e) None of these

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

(a) $\dfrac{1 - x^2}{\sqrt{x}}$ (b) $\dfrac{1}{\sqrt{1 - x^2}}$ (c) $1 - \dfrac{1}{x}$

(d) $\dfrac{1}{\sqrt{x}} + 1 - x^2$ (e) None of these

9. If the point $(-1, 1)$ lies on the graph of the equation $kx^2 - xy + y^2 = 5$, find the value of k.

(a) 7 (b) 3 (c) 5

(d) -3 (e) None of these

10. In which of the following equations is y a function of x?

(a) $2x + 3y - 1 = 0$ (b) $x^2 + 3y^2 = 7$ (c) $2x^2y = 7$

(d) Both *a* and *b* (e) Both *a* and *c*

11. Given $f(x) = |x - 3| - 5$, find $f(1) - f(5)$.

(a) 0 (b) -4 (c) 14

(d) -14 (e) None of these

12. Determine the even function.

(a) $f(x) = \sin x$ (b) $f(x) = \dfrac{x^3}{x^2 + 1}$ (c) $f(x) = 3x^4 + 5x^2 - 1$

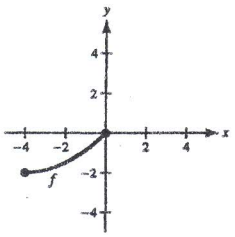
(d) $f(x) = \sqrt{x^3 + 1}$ (e) None of these

13. Find the point that lies on the line determined by the points $(1, -3)$ and $(-2, -4)$.

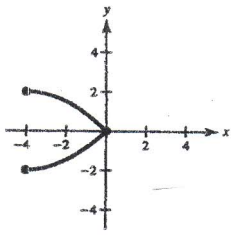
(a) $(3, -2)$ (b) $(-1, -1)$ (c) $(10, 0)$

(d) $(-4, 2)$ (e) $(4, 2)$

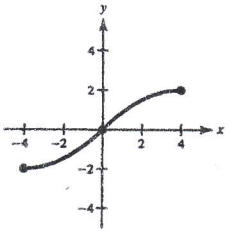
14. The domain of the function f shown in the figure is $-4 \le x \le 4$. Choose the complete graph of f if f is odd.



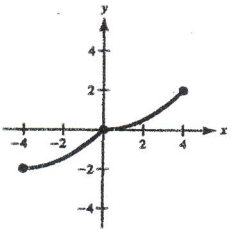
(a)



(b)



(c)



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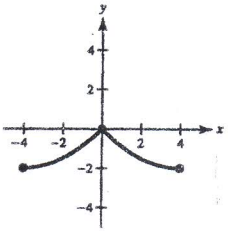
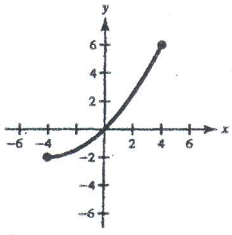


(e)



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.

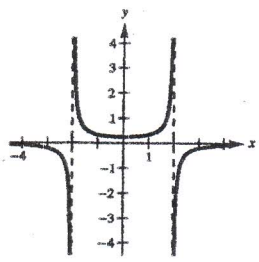
(c) Shift $f(x)$ two units upward.

(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 does not represent y as a function of x.

(a)



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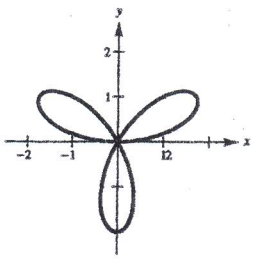

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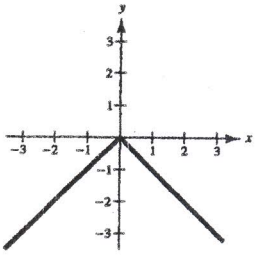
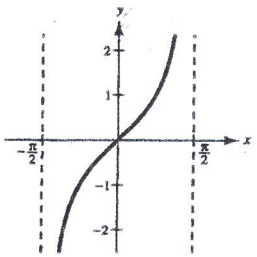


(d)



(e) Both a and d

17. Let $f(x) = \begin{cases} x^2 - 5, & x < 2 \\ 3x + 1, & x \geq 2 \end{cases}$. Find $f(1)$.

(a) -4 (b) -2 (c) 4

(d) 2 (e) 0

18. The dollar value of a product in 1998 is \$78. The value of the product is expected to decrease \$5.75 per year for the next 5 years. Write a linear equation that gives the dollar value V of the product in terms of the year t. (Let $t = 8$ represent 1998.)

(a) $V = 78 - 5.75t$ (b) $V = 78 + 5.75t$ (c) $V = 78 + 5.75(t - 8)$

(d) $V = 78 - 5.75(t - 8)$ (e) $V = 5.75 - 78(t - 8)$

19. A business had annual retail sales of \$124,000 in 1993 and \$211,000 in 1996. Assuming that the annual increase in sales follows a linear pattern, predict the retail for 2001.

(a) \$356,000 (b) \$435,000 (c) \$646,000

(d) \$298,000 (e) \$327,000

20. In order for a company to realize a profit in the manufacture and sale of a certain item, the revenue, R, for selling x items must be greater than the cost, C, of producing x items. If $R = 69.99x$ and $C = 59x + 850$, for what values of x will this product return a profit?

(a) $x \geq 78$ (b) $x \geq 15$ (c) $x \geq 85$

(d) $x \geq 13$ (e) None of these

 DJM

Test Form A
Chapter P

Name _____ **Date** _____
Class _____ **Section** _____

1. Find all intercepts of the graph of $y = \dfrac{x+2}{x-3}$.

(a) $(-2, 0)$ (b) $(-2, 0), (3, 0)$ (c) $\left(0, \frac{2}{3}\right), (3, 0)$

(d) $(-2, 0), \left(0, -\frac{2}{3}\right)$ (e) None of these

2. Determine if the graph of $y = \dfrac{x}{x^2 - 4}$ 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

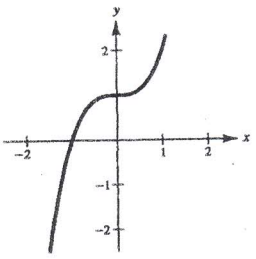
3. Find all points of intersection of the graphs of $x^2 - 2x - y = 6$ and $x - y = -4$.

(a) $(0, -6), (0, 4)$ (b) $(10, 14), (13, 17)$ (c) $(5, 9), (-2, 2)$

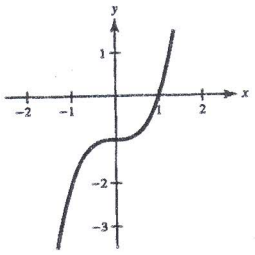
(d) $(-5, -1), (2, 6)$ (e) None of these

4. Which of the following is a sketch of the graph of the function $y = x^3 + 1$?

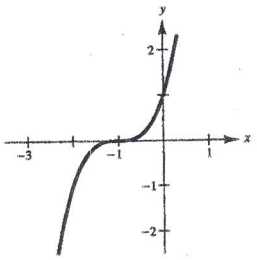
(a)



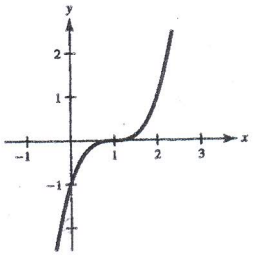
(b)



(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 $f(x) = \dfrac{1}{\sqrt{3 - 2x}}$.

(a) $\left(-\infty, \frac{3}{2}\right)$ (b) $\left[\frac{3}{2}, \infty\right)$ (c) $\left(\frac{3}{2}, \infty\right)$

(d) $\left(-\infty, \frac{3}{2}\right) \cup \left(\frac{3}{2}, \infty\right)$ (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 $f(x) = \dfrac{1}{\sqrt{x}}$ and $g(x) = 1 - x^2$, find $f(g(x))$.

(a) $\dfrac{1 - x^2}{\sqrt{x}}$ (b) $\dfrac{1}{\sqrt{1 - x^2}}$ (c) $1 - \dfrac{1}{x}$

(d) $\dfrac{1}{\sqrt{x}} + 1 - x^2$ (e) None of these

9. If the point $\left(-3, \frac{1}{2}\right)$ 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) $f(x) = \dfrac{3}{x^2}$

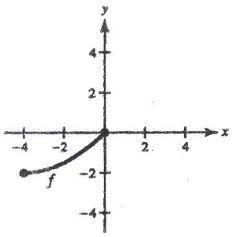
(d) $f(x) = \sqrt{x^2 + 1}$ (e) Both **a** and **b**

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

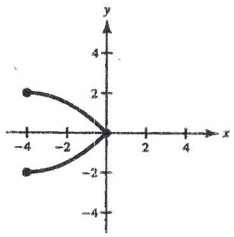
(a) $(0, 0)$ (b) $(5, 1)$ (c) $(4, -6)$

(d) $(5, -5)$ (e) $(-2, 0)$

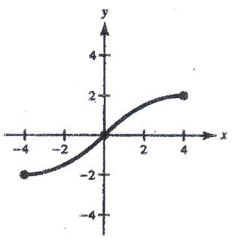
14. The domain of the function f shown in the figure is $-4 \le x \le 4$. Choose the complete graph of f if f is even.



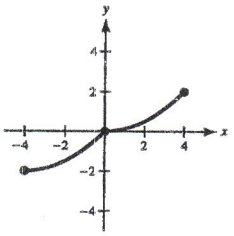
(a)



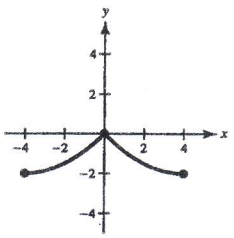
(b)



(c)



(d)



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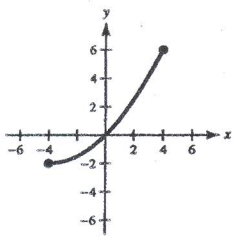


15. Describe the transformation needed to sketch the graph of $y = \dfrac{1}{x-2}$ using the graph of $f(x) = \dfrac{1}{x}$.

(a) Shift $f(x)$ two units to the right.

(b) Shift $f(x)$ two units to the left.

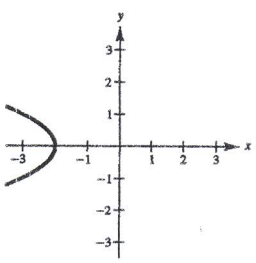
(c) Shift $f(x)$ two units upward.

(d) Shift $f(x)$ two units downward.

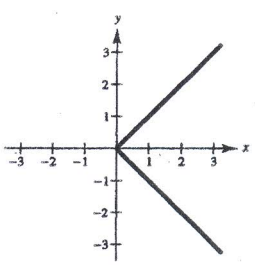
(e) Reflect $f(x)$ about the x-axis.

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

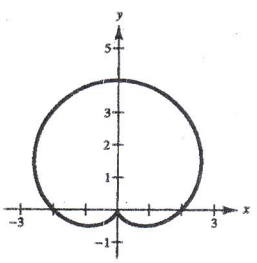
(a)



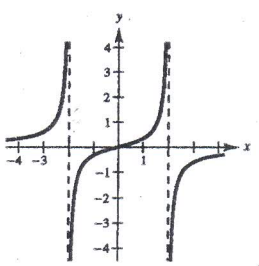
(b)



(c)



(d)



(e) None of these

17. Let $f(x) = \begin{cases} \frac{1}{x}, & x < 0 \\ 2x + 1, & x \geq 0 \end{cases}$. Find $f(3)$.

(a) $\frac{1}{3}$ (b) 1 (c) 7

(d) Undefined (e) $\frac{22}{3}$

18. The dollar value of a product in 1998 is \$1430. The value of the product is expected to increase \$83 per year for the next 5 years. Write a linear equation that gives the dollar value V of the product in terms of the year t. (Let $t = 8$ represent 1998.)

(a) $V = 1430 + 83(t - 8)$ (b) $V = 83 + 1430t$ (c) $V = 1430 + 83t$

(d) $V = 83 + 1430(t + 8)$ (e) $V = 1430 + 83(t + 8)$

19. During the first and second quarters of the year, a business had sales of \$150,000 and \$185,000, respectively. If the growth of sales follows a linear pattern, what will sales be during the fourth quarter?

(a) \$220,000 (b) \$235,000 (c) \$335,000

(d) \$255,000 (e) None of these

20. In order for a company to realize a profit in the manufacture and sale of a certain item, the revenue, R, for selling x items must be greater than the cost, C, of producing x items. If $R = 79.99x$ and $C = 61x + 1050$, for what values of x will this product return a profit?

(a) $x \geq 55$ (b) $x \geq 8$ (c) $x \geq 18$

(d) $x \geq 56$ (e) None of these

DJM

Test Form B **Name** _____ **Date** _____

Chapter P **Class** _____ **Section** _____

1. Find all intercepts of the graph of $y = \dfrac{x-1}{x+3}$.

(a) $(1, 0), \left(0, -\frac{1}{3}\right)$ (b) $(1, 0)$ (c) $(-3, 0), (1, 0)$

(d) $(-3, 0), \left(0, -\frac{1}{3}\right)$ (e) None of these

2. Determine if the graph of $y = \dfrac{x^2}{x^2-4}$ 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

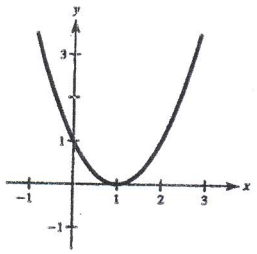
3. Find all points of intersection of the graphs of $x^2 + 3x - y = 3$ and $x + y = 2$.

(a) $(5, -3), (1, 1)$ (b) $(0, -3), (0, 2)$ (c) $(-5, -3), (1, 1)$

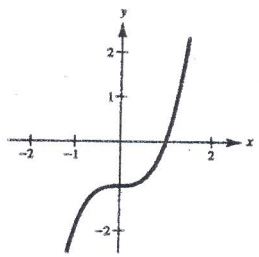
(d) $(-5, 7), (1, 1)$ (e) None of these

4. Which of the following is a sketch of the graph of the function $y = (x-1)^3$?

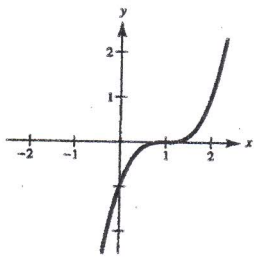
(a)



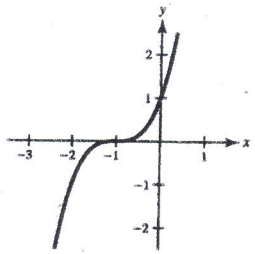
(b)



(c)



(d)



(e) None of these

5. Find an equation for the line passing through the point $(4, -1)$ and parallel to the line $2x - 3y = 3$.

(a) $2x - 3y = 11$ (b) $2x - 3y = -5$ (c) $3x - 2y = -5$

(d) $y = \frac{2}{3}x - 1$ (e) None of these

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

(a) $\left(-\infty, -\frac{3}{2}\right)$ (b) $\left[-\frac{3}{2}, \infty\right)$ (c) $\left(-\frac{3}{2}, \infty\right)$

(d) $\left(-\infty, -\frac{3}{2}\right) \cup \left(-\frac{3}{2}, \infty\right)$ (e) None of these

7. Find $f(x + \Delta x)$ for $f(x) = x^2 - 2x - 3$.

(a) $x^2 - x - 3 + \Delta x$ (b) $x^2 + 2x(\Delta x) + (\Delta x)^2 - 2x - 2\Delta x - 3$

(c) $x^2 - 2x - 3 + \Delta x$ (d) 5

(e) None of these

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

(a) $\dfrac{1 - x^2}{\sqrt{x}}$ (b) $\dfrac{1}{\sqrt{1 - x^2}}$ (c) $1 - \dfrac{1}{x}$

(d) $\dfrac{1}{\sqrt{x}} + 1 - x^2$ (e) None of these

9. If the point $(-1, 1)$ lies on the graph of the equation $kx^2 - xy + y^2 = 5$, find the value of k.

(a) 7 (b) 3 (c) 5

(d) -3 (e) None of these

10. In which of the following equations is y a function of x?

(a) $2x + 3y - 1 = 0$ (b) $x^2 + 3y^2 = 7$ (c) $2x^2y = 7$

(d) Both *a* and *b* (e) Both *a* and *c*

11. Given $f(x) = |x - 3| - 5$, find $f(1) - f(5)$.

(a) 0 (b) -4 (c) 14

(d) -14 (e) None of these

12. Determine the even function.

(a) $f(x) = \sin x$ (b) $f(x) = \dfrac{x^3}{x^2 + 1}$ (c) $f(x) = 3x^4 + 5x^2 - 1$

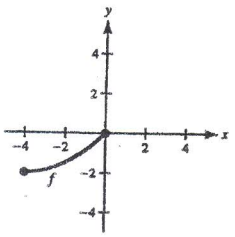
(d) $f(x) = \sqrt{x^3 + 1}$ (e) None of these

13. Find the point that lies on the line determined by the points $(1, -3)$ and $(-2, -4)$.

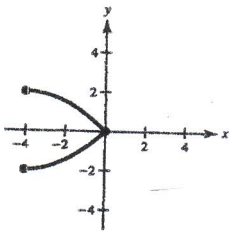
(a) $(3, -2)$ (b) $(-1, -1)$ (c) $(10, 0)$

(d) $(-4, 2)$ (e) $(4, 2)$

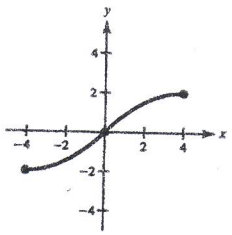
14. The domain of the function f shown in the figure is $-4 \le x \le 4$. Choose the complete graph of f if f is odd.



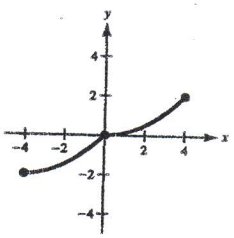
(a)



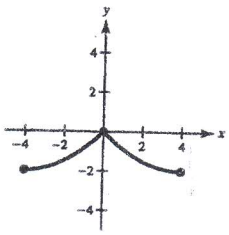
(b)



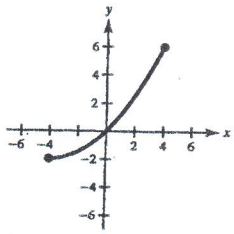
(c)



(d)



(e)



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.

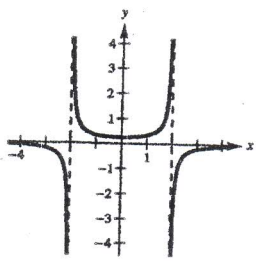
(c) Shift $f(x)$ two units upward.

(d) Shift $f(x)$ two units downward.

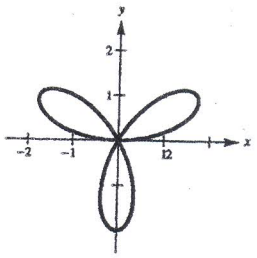
(e) Reflect $f(x)$ about the x-axis.

16. Use the vertical line test to determine which of the following graphs does not represent y as a function of x.

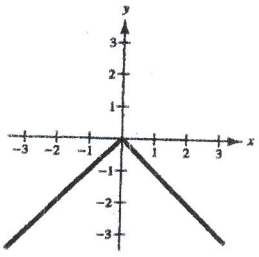
(a)



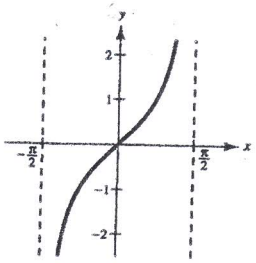
(b)



(c)



(d)



(e) Both a and d

17. Let $f(x) = \begin{cases} x^2 - 5, & x < 2 \\ 3x + 1, & x \geq 2 \end{cases}$. Find $f(1)$.

(a) -4 (b) -2 (c) 4

(d) 2 (e) 0

18. The dollar value of a product in 1998 is \$78. The value of the product is expected to decrease \$5.75 per year for the next 5 years. Write a linear equation that gives the dollar value V of the product in terms of the year t. (Let $t = 8$ represent 1998.)

(a) $V = 78 - 5.75t$ (b) $V = 78 + 5.75t$ (c) $V = 78 + 5.75(t - 8)$

(d) $V = 78 - 5.75(t - 8)$ (e) $V = 5.75 - 78(t - 8)$

19. A business had annual retail sales of \$124,000 in 1993 and \$211,000 in 1996. Assuming that the annual increase in sales follows a linear pattern, predict the retail for 2001.

(a) \$356,000 (b) \$435,000 (c) \$646,000

(d) \$298,000 (e) \$327,000

20. In order for a company to realize a profit in the manufacture and sale of a certain item, the revenue, R, for selling x items must be greater than the cost, C, of producing x items. If $R = 69.99x$ and $C = 59x + 850$, for what values of x will this product return a profit?

(a) $x \geq 78$ (b) $x \geq 15$ (c) $x \geq 85$

(d) $x \geq 13$ (e) None of these