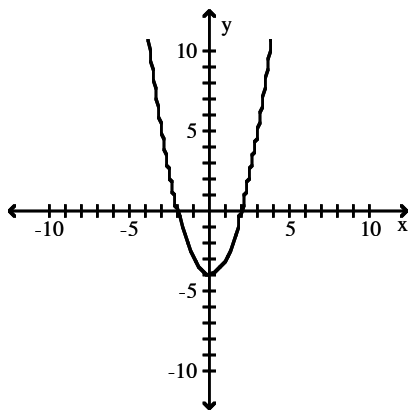


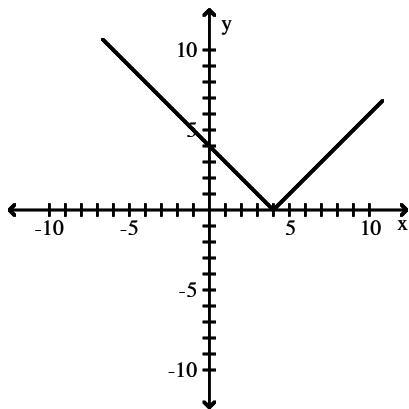
# Answer Key

Testname: M101PEC02

- 1)  $(-\infty, 4); (4, \infty)$
- 2) Increasing on  $(-\infty, 0]$ ; Decreasing on  $[0, \infty)$
- 3) Increasing on  $[-2, 0]$  and  $[3, 5]$ ; Decreasing on  $[1, 3]$ ; Constant on  $[-5, -2]$
- 4) D:  $[2, \infty)$ , R:  $[0, \infty)$
- 5) D:  $(-\infty, 6) \cup (6, \infty)$ , R:  $(-\infty, 1) \cup (1, \infty)$
- 6) Increasing
- 7) Increasing
- 8) Even
- 9) Neither
- 10) Neither
- 11) y-axis
- 12) Neither
- 13)  $y = |x| + 7$
- 14)



15)

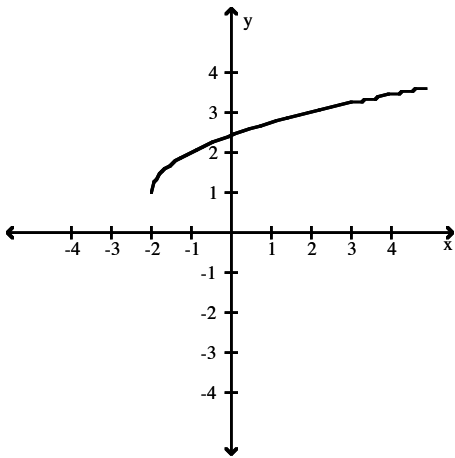


16)  $y = \sqrt{x+4}$

Answer Key

Testname: M101PEC02

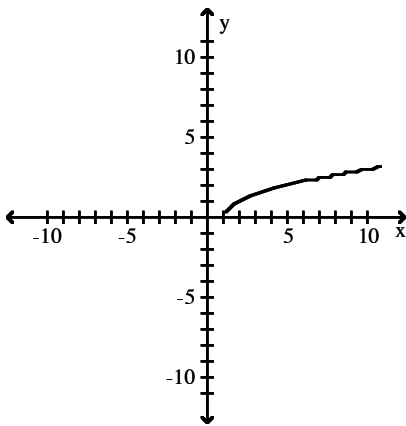
17)



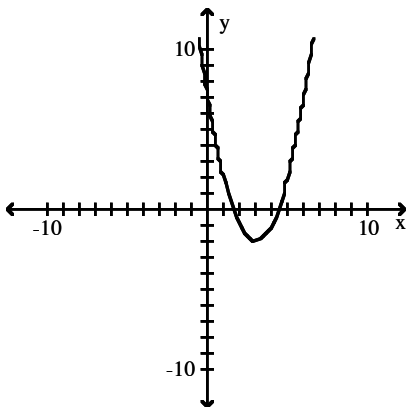
18)  $(-\infty, -2]; [0, \infty)$

19)  $(-\infty, \infty); (-\infty, \infty)$

20)



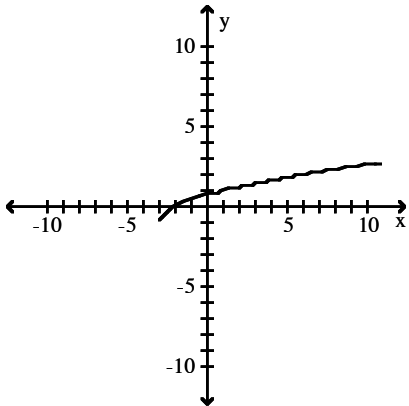
21)



Answer Key

Testname: M101PEC02

22)



23) C

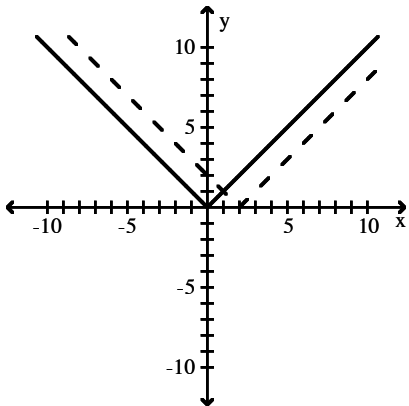
24) A

25) D

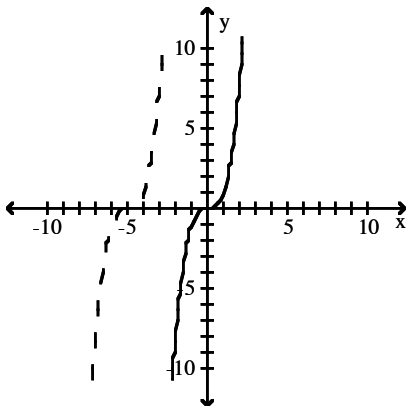
26)  $y = 0.9x^3$

27)  $y = -2.4|x|$

28)



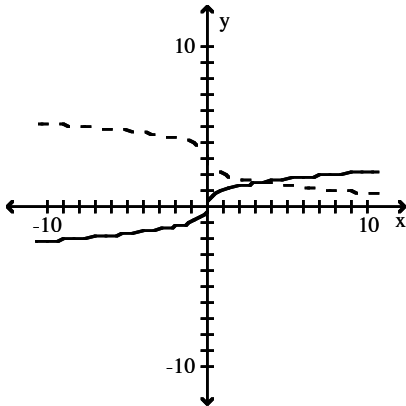
29)



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30)



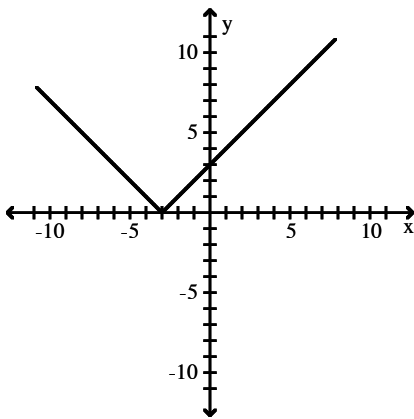
31) 3; left; 5; x; 8; downward

$$32) y = -\frac{1}{5}(x+2)^2 - 8$$

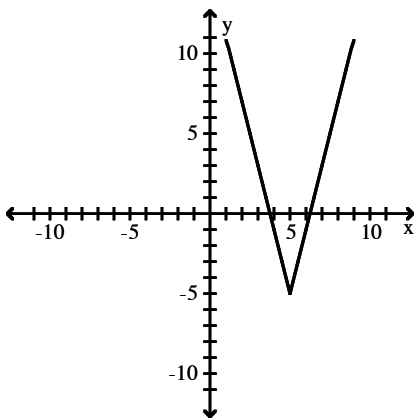
$$33) y = 7.1|-x| - 5$$

$$34) g(x) = (x - 2)^2 - 2$$

35)



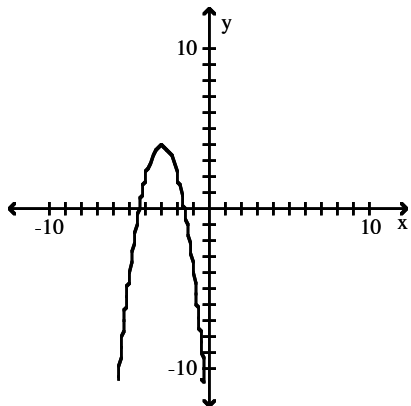
36)



Answer Key

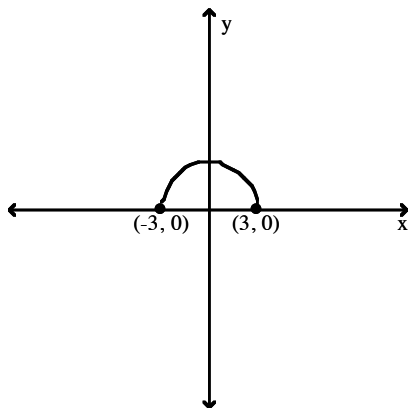
Testname: M101PEC02

37)

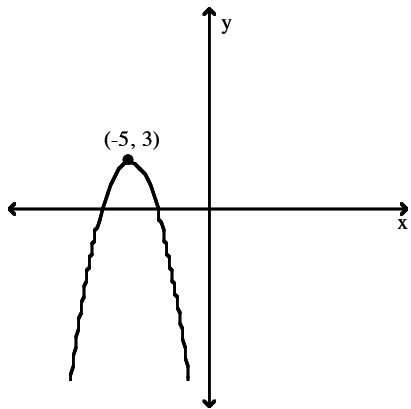


38)  $g(x) = 0.5|x+6| - 4$

39)



40)



41) Increasing on  $(-\infty, \infty)$

42) Increasing on  $[-3, 0]$ ; Decreasing on  $[-5, -3)$  and  $[2, 5]$ ; Constant on  $[0, 2]$

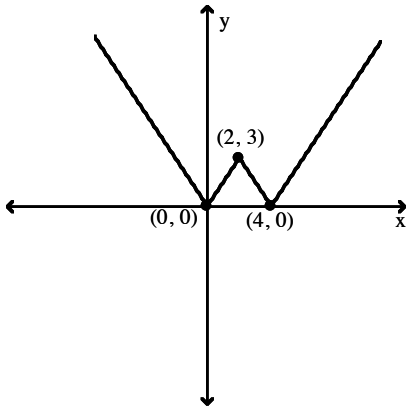
43) D

44) A

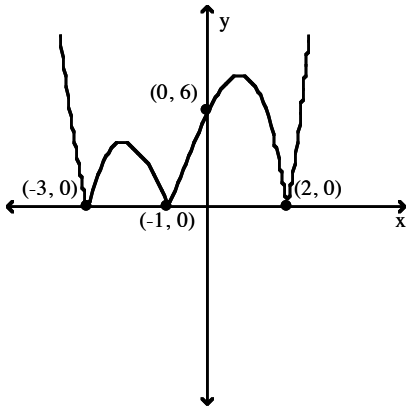
Answer Key

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45)



46)



47)  $(-\infty, 0) \cup (4, \infty)$

48)  $\left\{-\frac{11}{3}, \frac{13}{3}\right\}$

49)  $\left\{\frac{5}{7}, -\frac{9}{7}\right\}$

50)  $\left[-3, \frac{13}{3}\right]$

51)  $(-\infty, -24) \cup (12, \infty)$

52)  $\left\{1, -\frac{17}{3}\right\}$

53)  $150^\circ\text{C} \leq \text{Temperature} \leq 175^\circ\text{C}$

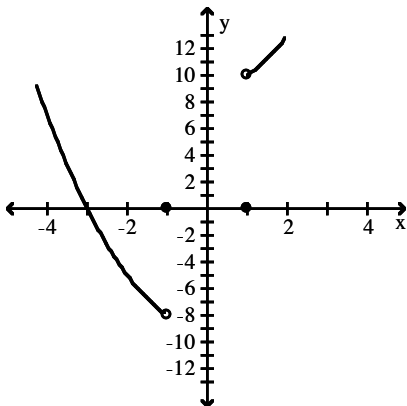
54)  $[0.57, 4.91]$

55) 7

Answer Key

Testname: M101PEC02

56)



57)

$$f(x) = \begin{cases} 3 & \text{if } x < 0 \\ x^2 - 1 & \text{if } x \geq 0 \end{cases}$$

58)

$$f(x) = \begin{cases} x + 3 & \text{if } x \leq 0 \\ -\sqrt{x} & \text{if } x > 0 \end{cases}$$

59)  $8x^2 + 4x + 0$

60)  $\frac{21x}{4 - 9x}$

61) -2

62) 28

63)  $[-2, \infty)$

64) 3

65)  $(-\infty, -8) \cup (-8, 8) \cup (8, \infty)$

66) -2

67) Yes, yes

68) Yes, yes