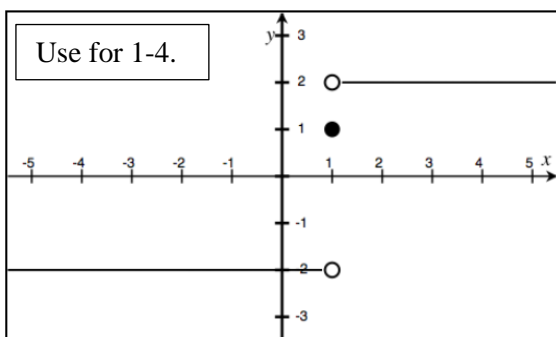


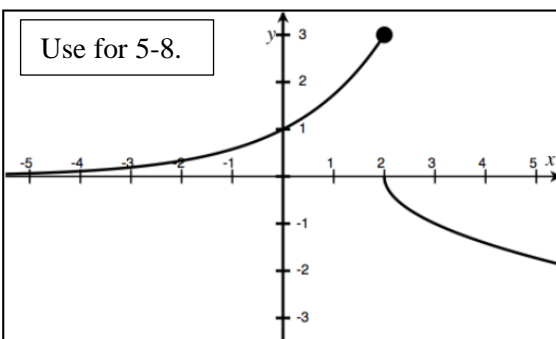
Skill Builder: Topic 1.3 - Estimating Limit Values from Graphs

When completed properly, the table below will reveal a portion of a quote made famous by one of the founders of calculus. To unveil the letters, answer each multiple choice question correctly and place the appropriate letter in the square that corresponds to the question number. Not all problem numbers appear in the puzzle.

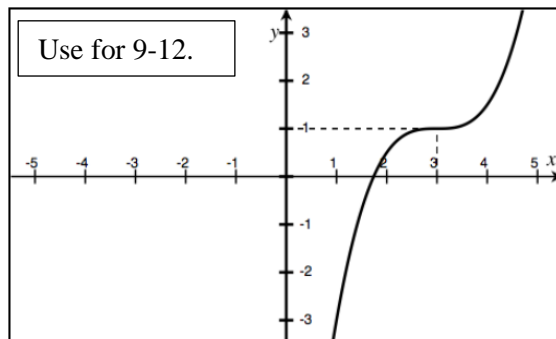
26	4	36	15	54	31	63		29	57	6	64		53	18	13	33	34	-	23		
39	24	37	55	8	62	45		56	24	58		72	12	65		41	22	-			
38	5	38	33	14	46	30	8	1	27		43	67	42	11	61	68		66	22	16	
49	47		19	57	46	20		44	50	44	21	51	6	2	60	61	27				
9	33	25	71	48	7		56	24	70		40	69		10	59	52	28	35	17	23	



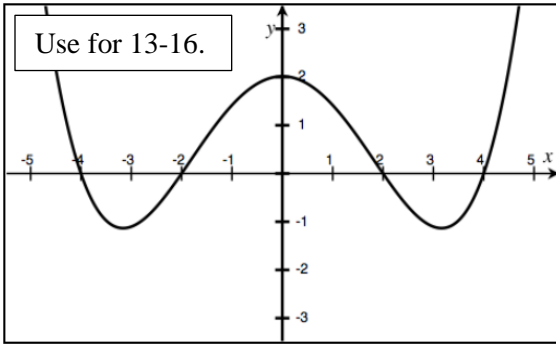
- | | |
|--|---|
| <p>1. $\lim_{x \rightarrow 1^-} f(x) =$
 N. -2 L. 2
 P. 1 Q. -1</p> | <p>2. $\lim_{x \rightarrow 1^+} f(x) =$
 G. -2 H. 2
 I. undefined J. 1</p> |
| <p>3. $\lim_{x \rightarrow 1} f(x) =$
 D. DNE F. 1
 G. -2 H. 2</p> | <p>4. $f(1) =$
 I. 1 T. 2
 L. -2 N. -1</p> |



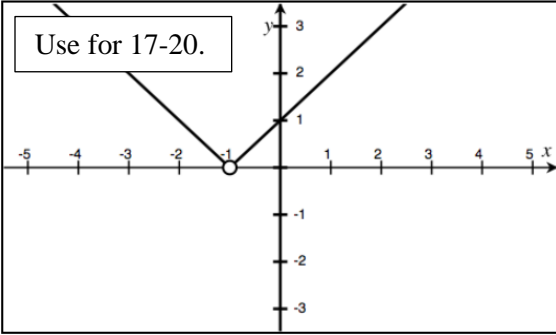
- | | |
|--|--|
| <p>5. $\lim_{x \rightarrow 2^-} f(x) =$
 V. 3 S. 2
 L. undefined M. ∞</p> | <p>6. $\lim_{x \rightarrow 2^+} f(x) =$
 S. 3 T. 0
 L. ∞ H. undefined</p> |
| <p>7. $\lim_{x \rightarrow 2} f(x) =$
 J. 3 K. 0
 L. ∞ D. DNE</p> | <p>8. $f(2) =$
 I. 3 K. 0
 T. ∞ S. undefined</p> |



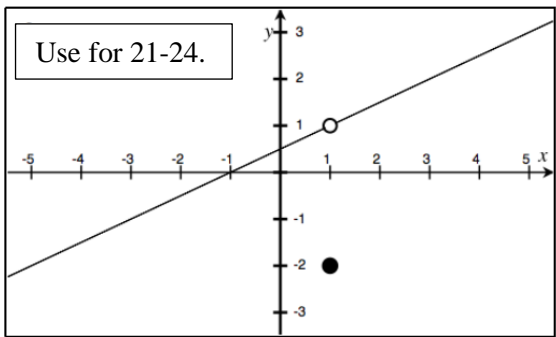
- | | |
|--|---|
| <p>9. $\lim_{x \rightarrow 3^-} f(x) =$
 C. 3 A. 1
 G. undefined H. ∞</p> | <p>10. $\lim_{x \rightarrow 3^+} f(x) =$
 N. 1 E. 3
 P. 0 O. undefined</p> |
| <p>11. $\lim_{x \rightarrow 3} f(x) =$
 U. 1 V. -1
 P. 3 R. undefined</p> | <p>12. $f(3) =$
 A. 1 O. 3
 E. 0 I. undefined</p> |



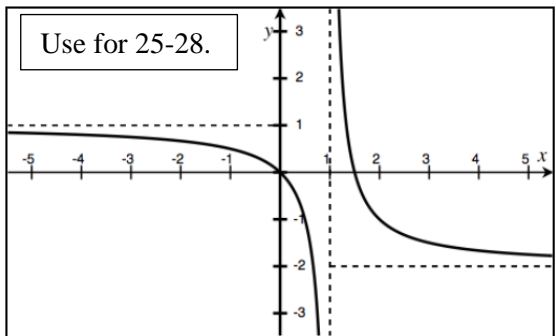
13. $\lim_{x \rightarrow 0^-} f(x) =$ F. 1 E. 2 S. 0 C. undefined	14. $\lim_{x \rightarrow 0^+} f(x) =$ A. 1 T. 3 Y. 2 S. undefined
15. $\lim_{x \rightarrow 0} f(x) =$ H. 2 O. 3 P. 0 L. undefined	16. $f(0) =$ U. 2 O. 3 N. 0 I. undefined



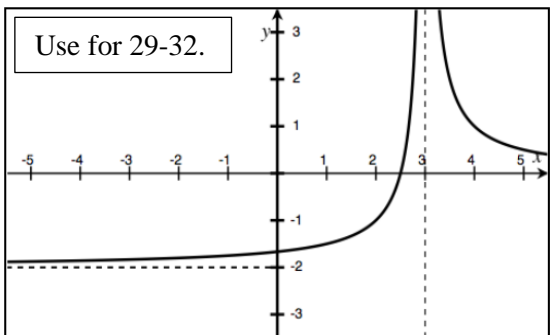
17. $\lim_{x \rightarrow -1^-} f(x) =$ R. 0 W. -1 U. undefined V. ∞	18. $\lim_{x \rightarrow -1^+} f(x) =$ E. -1 H. 0 I. 1 O. undefined
19. $\lim_{x \rightarrow -1} f(x) =$ M. 0 L. -1 I. 1 O. undefined	20. $f(-1) =$ A. 0 E. -1 I. 1 H. undefined



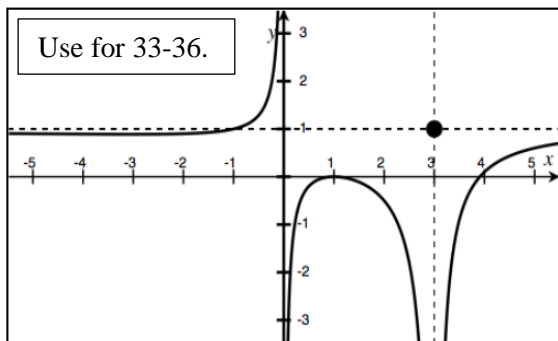
21. $\lim_{x \rightarrow 1^-} f(x) =$ A. 0 E. -1 R. 1 O. undefined	22. $\lim_{x \rightarrow 1^+} f(x) =$ A. 0 E. -2 O. 1 L. undefined
23. $\lim_{x \rightarrow 1} f(x) =$ T. 0 I. -1 S. 1 G. undefined	24. $f(1) =$ S. 0 O. -2 I. 1 J. undefined



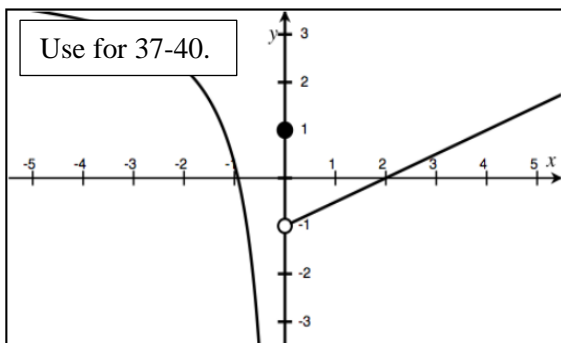
25. $\lim_{x \rightarrow 1^-} f(x) =$ O. $-\infty$ E. 1 I. DNE S. ∞	26. $\lim_{x \rightarrow 1^+} f(x) =$ A. $-\infty$ E. 1 S. DNE W. ∞
27. $\lim_{x \rightarrow 1} f(x) =$ A. $-\infty$ H. 1 G. DNE P. ∞	28. $f(1) =$ A. $-\infty$ C. 1 B. undefined D. ∞



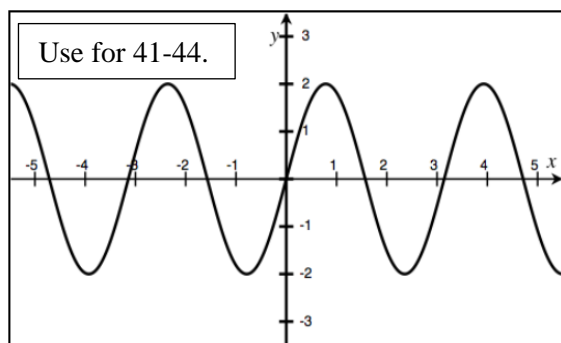
29. $\lim_{x \rightarrow 3^-} f(x) =$ E. $-\infty$ B. 1 S. DNE M. ∞	30. $\lim_{x \rightarrow 3^+} f(x) =$ V. $-\infty$ E. 1 I. DNE H. ∞
31. $\lim_{x \rightarrow 3} f(x) =$ L. $-\infty$ P. 1 I. undefined U. ∞	32. $f(3) =$ L. $-\infty$ P. 1 I. undefined U. ∞



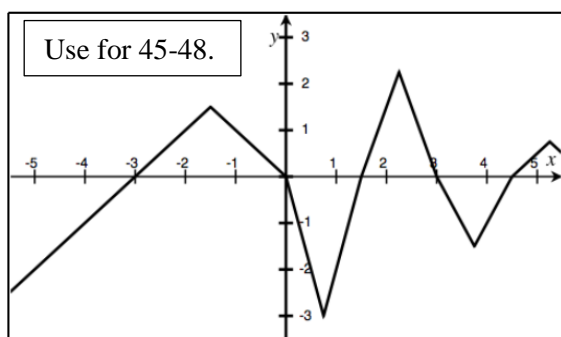
33. $\lim_{x \rightarrow 3^-} f(x) =$ R. $-\infty$ E. 1 C. DNE K. ∞	34. $\lim_{x \rightarrow 3^+} f(x) =$ E. $-\infty$ S. 1 I. DNE O. ∞
35. $\lim_{x \rightarrow 3} f(x) =$ E. $-\infty$ F. 1 I. undefined O. ∞	36. $f(3) =$ R. $-\infty$ T. 1 S. undefined U. ∞



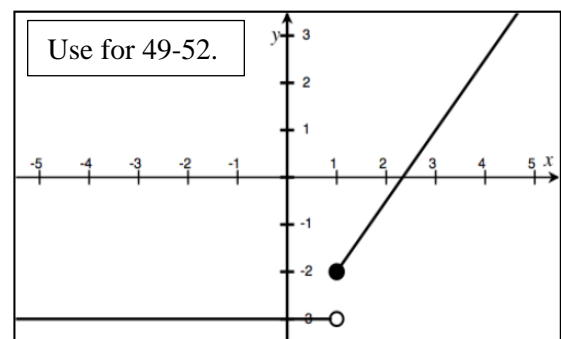
37. $\lim_{x \rightarrow 0^-} f(x) =$ T. $-\infty$ E. 1 I. DNE O. -1	38. $\lim_{x \rightarrow 0^+} f(x) =$ A. $-\infty$ S. 1 I. DNE E. -1
39. $\lim_{x \rightarrow 0} f(x) =$ S. $-\infty$ L. 1 N. DNE M. -1	40. $f(0) =$ A. $-\infty$ I. 1 C. undefined P. -1



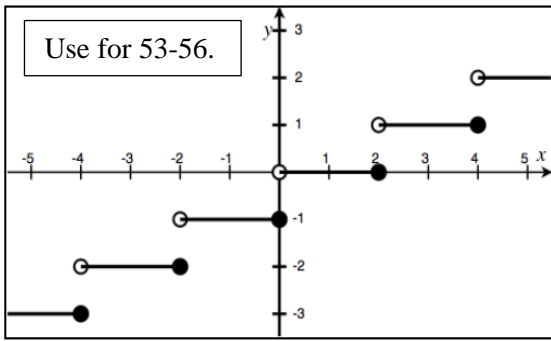
41. $\lim_{x \rightarrow 0^-} f(x) =$ P. $-\infty$ D. 0 I. DNE O. -1	42. $\lim_{x \rightarrow 0^+} f(x) =$ F. $-\infty$ E. 1 O. 0 L. -1
43. $\lim_{x \rightarrow 0} f(x) =$ A. 0 E. 1 I. DNE O. -1	44. $f(0) =$ A. $-\infty$ E. 0 I. DNE O. -1



45. $\lim_{x \rightarrow 0^-} f(x) =$ S. $-\infty$ E. -1 P. DNE G. 0	46. $\lim_{x \rightarrow 0^+} f(x) =$ P. $-\infty$ T. 0 I. DNE S. -1
47. $\lim_{x \rightarrow 0} f(x) =$ M. $-\infty$ S. 0 L. DNE O. -1	48. $f(0) =$ S. $-\infty$ P. undefined N. 0 O. -1



49. $\lim_{x \rightarrow 1^-} f(x) =$ A. 1 E. -2 M. DNE I. -3	50. $\lim_{x \rightarrow 1^+} f(x) =$ V. -2 S. -3 I. 1 O. ∞
51. $\lim_{x \rightarrow 1} f(x) =$ A. $-\infty$ P. 1 Y. DNE O. ∞	52. $f(1) =$ M. -2 N. 1 L. undefined O. -3

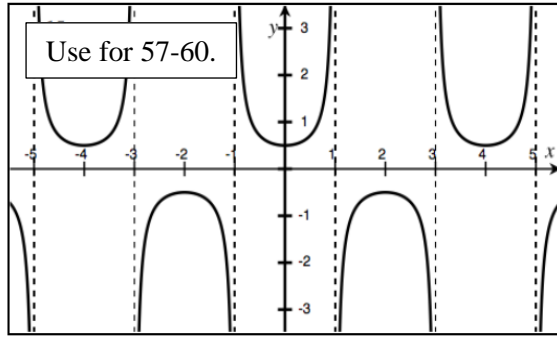


53. $\lim_{x \rightarrow 0^-} f(x) =$
S. $-\infty$ **E.** 0
A. DNE **T.** -1

54. $\lim_{x \rightarrow 0^+} f(x) =$
M. $-\infty$ **O.** 0
I. DNE **S.** -1

55. $\lim_{x \rightarrow 0} f(x) =$
W. $-\infty$ **S.** 0
H. DNE **O.** -1

56. $f(0) =$
P. $-\infty$ **O.** undefined
I. 0 **Y.** -1

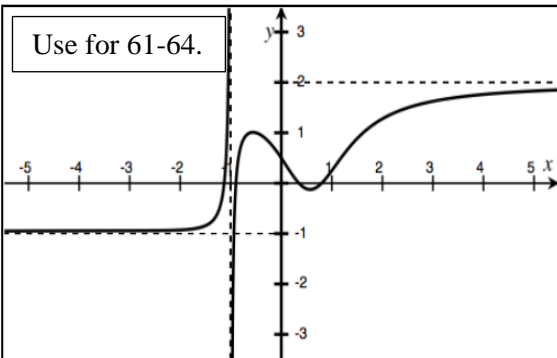


57. $\lim_{x \rightarrow 1^-} f(x) =$
L. 1 **H.** -2
I. $-\infty$ **A.** ∞

58. $\lim_{x \rightarrow 1^+} f(x) =$
A. -2 **U.** $-\infty$
I. 1 **O.** ∞

59. $\lim_{x \rightarrow 1} f(x) =$
P. $-\infty$ **S.** 1
U. DNE **O.** ∞

60. $f(1) =$
A. -2 **E.** 1
I. undefined **O.** -3

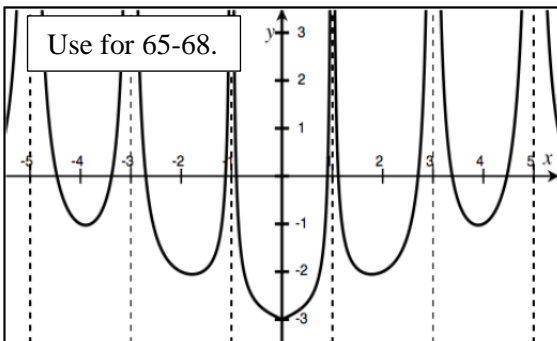


61. $\lim_{x \rightarrow -1^-} f(x) =$
X. $-\infty$ **P.** 1
U. DNE **N.** ∞

62. $\lim_{x \rightarrow -1^+} f(x) =$
A. 0 **D.** -1
N. $-\infty$ **O.** undefined

63. $\lim_{x \rightarrow -1} f(x) =$
A. ∞ **M.** -1
S. 1 **T.** DNE

64. $f(-1) =$
L. 0 **P.** -1
A. 1 **H.** undefined

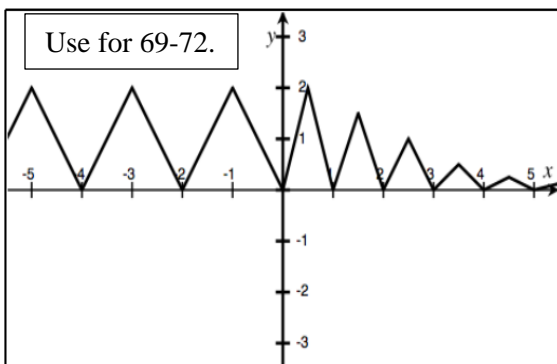


65. $\lim_{x \rightarrow 0^-} f(x) =$
A. 0 **E.** 1
I. -5 **N.** -3

66. $\lim_{x \rightarrow 0^+} f(x) =$
Y. -3 **P.** 1
V. 0 **O.** 3

67. $\lim_{x \rightarrow 0} f(x) =$
R. -3 **P.** 1
I. -5 **L.** 3

68. $f(0) =$
D. -3 **S.** 1
I. -5 **O.** 3



69. $\lim_{x \rightarrow 0^-} f(x) =$
L. DNE **S.** 0
I. ∞ **O.** $-\infty$

70. $\lim_{x \rightarrow 0^+} f(x) =$
S. DNE **U.** 0
I. ∞ **P.** $-\infty$

71. $\lim_{x \rightarrow 0} f(x) =$
A. DNE **U.** 0
I. ∞ **O.** $-\infty$

72. $f(0) =$
L. undefined **C.** 0
I. ∞ **O.** $-\infty$