



# LIMITS COURSE

## LESSON 8

One-sided limits of functions.  
Continuity of functions.

*Answers to Homework*



## Part 1: TEST

- 1) c
- 2) d
- 3) a
- 4) a
- 5) d
- 6) b
- 7) d
- 8) c
- 9) b
- 10) b

## ANSWERS TO EXERCISES

### Ex. 1

- 1)  $+\infty$
- 2)  $+\infty$
- 3)  $-\infty$
- 4)  $-\infty$
- 5)  $+\infty$
- 6)  $-\infty$
- 7)  $+\infty$
- 8)  $+\infty$
- 9) 0
- 10)  $+\infty$

### Ex. 2

- 1) The function is **not** continuous at  $x_0 = 0$  . The function is discontinuous.
- 2) The function is **not** continuous at  $x_0 = 1$  . The function is discontinuous.
- 3) The function is continuous at  $x_0 = 5$  . The function is continuous.
- 4) The function is continuous at  $x_0 = 0$  . The function is continuous.
- 5) The function is **not** continuous at  $x_0 = 2$  . The function is discontinuous.
- 6) The function is continuous at  $x_0 = 2$  . The function is **not** continuous at  $x_0 = -2$  .  
The function is discontinuous.



**Ex. 3**

- 1)  $a=-5$
- 2)  $a=-2$
- 3)  $a=1, b=-1$

END