**MATH 1073 Calculus I**

**Assignment 2**

1. A patient receives a 150-mg injection of a drug every 4 hours. The graph shows the amount f std of the drug in the bloodstream after t hours. Find

  
Ans

These limits show that there is an abrupt change in the amount of drug in

the patient’s bloodstream at  = 12 h. The left-hand limit represents the amount of the drug just before the fourth injection.

The right-hand limit represents the amount of the drug just after the fourth injection.

1. (a) What is wrong with the following equation?  
   (b) In view of part (a), explain why the equation

is correct.

Ans

(a) The left-hand side of the equation is not defined for x = 2, but the right-hand side is.

(b) Since the equation holds for all x≠2, it follows that both sides of the equation approach the same limit as x→ 2. Remember that in finding , we never consider x =a .

3-8 Evaluate the limit, if it exists. the limit does not exist, explain why.













1. Use the Squeeze Theorem to show that

Ans



1. The **greatest integer function** is defined by − the largest integer that is less than or equal to *x*. (For instance, .) Evaluate

Ans

Ans





Ans

