**Lab assignment Question 3 and 4**

Question 3

Find the limits of:



Solution:

=

Solution:

Apply l’hopital’s rule:

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Quick Approximation:

1. = 9455
2. = 25502500

Prove by Induction

Question 4

Master theorem:

where a>0, b>1,and d>=0

Solution:

a = 7, b = 2, d = 2

= 2.807 > 2

⸫ order of computation:

Solution:

a = 5, b = 3, d = 1

= 1.464 > 1

⸫ order of computation:

Solution:

a = 3, b = 2, d = 1

= 1.585 > 1