

Student ID:

MATH102, Section 1  
Fall 2018, Term 173

Quiz 5  
Version A

Student Name:

Serial Number: \_\_\_\_\_

**Instructions:** Show Your Work!

1. (3 pts) Evaluate, if possible

$$\int_0^1 \frac{dx}{\sqrt{1-x}}.$$

2. (3 pts) Show that the sequence is decreasing

$$\left\{ \frac{e^n}{(n+1)!} \right\}.$$

3. (4 pts) Determine whether the series converges or diverges. If it converges, find its sum.

$$\sum_{n=1}^{\infty} \frac{3^{n+2}}{5^{n-1}}$$

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Student ID:

MATH102, Section 3  
Fall 2018, Term 173

Quiz 5  
Version B

Student Name:

Serial Number: \_\_\_\_\_

**Instructions:** Show Your Work!

1. (3 pts) Evaluate, if possible

$$\int_1^2 \frac{dx}{1-x}$$

2. (3 pts) Show that the sequence is decreasing

$$\left\{ \frac{5^n}{n!} \right\}$$

3. (4 pts) Determine whether the series converges or diverges. If it converges, find its sum.

$$\sum_{n=1}^{\infty} \frac{4^{n+2}}{7^{n-1}}$$