**Chapter 6**

**Applications of Integration**

**6.7 Integrals, Exponential Functions, and Logarithms**

**Section Exercises**

**For the following exercises, find the derivative** 

295. 

Answer:

297. 

Answer: 

**For the following exercises, find the indefinite integral.**

299. 

Answer: 

**For the following exercises, find the derivative  (You can use a calculator to plot the function and the derivative to confirm that it is correct.)**

301. **[T]**

Answer: 

303. **[T]**

Answer: 

305. **[T]**

Answer:

307. **[T]**

Answer: 

309. **[T]**

Answer: 

**For the following exercises, find the definite or indefinite integral.**

311. 

Answer: 

313. 

Answer: 

315. 

Answer: 

317. 

Answer:

319. 

Answer: 

**For the following exercises, compute  by differentiating **

321. 

Answer: 

323. 

Answer: 

325. 

Answer: 

327. 

Answer: 

329. 

Answer:

**For the following exercises, evaluate by any method.**

331. 

Answer: 

333. 

Answer: 

**For the following exercises, use the function  If you are unable to find intersection points analytically, use a calculator.**

335. Find the area of the region enclosed by  and  above

Answer: 

337. Find the area between  and the *x*-axis from 

Answer: 

339. **[T]** Find the surface area of the shape created when rotating the curve in the previous exercise from  to  around the *x*-axis.

Answer:

**If you are unable to find intersection points analytically in the following exercises, use a calculator.**

341. **[T]** Find the arc length of  from 

Answer:

**For the following exercises, verify the derivatives and antiderivatives.**

343. 

Answer: This is a proof; therefore, no answer is provided.

345. 

Answer: This is a proof; therefore, no answer is provided.

347. 

Answer: This is a proof; therefore, no answer is provided.

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