

Lesson 33 Worksheet: Trapezoidal Rule

April 16, 2018

Use the Trapezoidal Rule with n trapezoids to approximate the following integrals.

1. $\int_0^1 \sin(5x^2 - 1) dx$, $n = 5$
2. $\int_1^{17} \ln(x + 2) dx$, $n = 5$
3. $\int_0^{2.1} \sqrt{|\cos x|} dx$, $n = 3$
4. Given the following table, approximate $\int_{-4}^6 f(x) dx$ using
 - (a) a Right Riemann Sum
 - (b) a Left Riemann Sum
 - (c) Trapezoidal Rule

x	-4	-2	0	2	4	6
$f(x)$	100	50	-2	15	-17	-100

Answers:

1. -0.0378

2. 36.4176

3. 1.4994

4. (a)

(b) 292

(c) -108

(d) 92