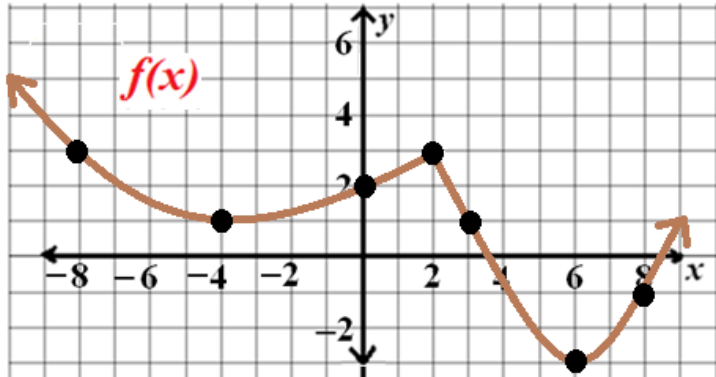


Riemann Sums Worksheet

Use the graph below to answer the questions 1-9.



1.) Fill in the chart with the given points from the graph of $f(x)$.

x	-8						8
$f(x)$							

2.) Approximate $\int_{x=-8}^{x=0} f(x) dx$ using a Right Riemann Sum with the given subintervals.

3.) Approximate $\int_{x=-4}^{x=3} f(x) dx$ using a Left Riemann Sum with the given subintervals.

4.) Approximate $\int_{x=-4}^{x=6} f(x) dx$ using a Trapezoidal Riemann Sum with the given subintervals.

5.) Approximate $\int_{x=-8}^{x=8} f(x) dx$ using a Right Riemann Sum with the given subintervals.

6.) Approximate $\int_{x=3}^{x=8} f(x) dx$ using a Left Riemann Sum with the given subintervals.

7.) Approximate $\int_{x=-4}^{x=2} f(x) dx$ using a Right Riemann Sum with the given subintervals.

8.) Approximate $\int_{x=0}^{x=3} f(x) dx$ using a Trapezoidal Riemann Sum with the given subintervals.

9.) Approximate $\int_{x=-4}^{x=-8} f'(x) dx$ using a Left Riemann Sum with the given subintervals.

x	0	4	8	12	16	20	24	27	29
$f'(x)$	1	2	3	4	5	6	7	8	9

Use table above to answer the questions 10-19.

10.) Approximate $\int_{x=0}^{x=8} f'(x) dx$ using a Right Riemann Sum with the given subintervals.

11.) Approximate $\int_{x=0}^{x=16} f'(x) dx$ using a left Riemann Sum with 2 subintervals of equal length.

12.) Approximate $\int_{x=0}^{x=24} f'(x) dx$ using a Trapezoidal Riemann Sum with 3 subintervals of equal length.

13.) Approximate $\int_{x=0}^{x=16} f'(x) dx$ using a midpoint Riemann Sum with 2 subintervals of equal length.

14.) Explain why a midpoint sum can't be used to approximate $\int_{x=24}^{x=29} f'(x) dx$.

15.) Approximate $\int_{x=20}^{x=29} f'(x) dx$ using a left Riemann Sum with given subintervals.

16.) Approximate $\int_{x=16}^{x=16} f'(x) dx$ using an *Octagonal* Riemann Sum with the given subintervals.

Evaluate

17.) $\int_{x=4}^{x=8} f''(x) dx$

18.) $\int_{x=0}^{x=16} f''(x) dx$

19.) $\int_{x=8}^{x=0} f''(x) dx$