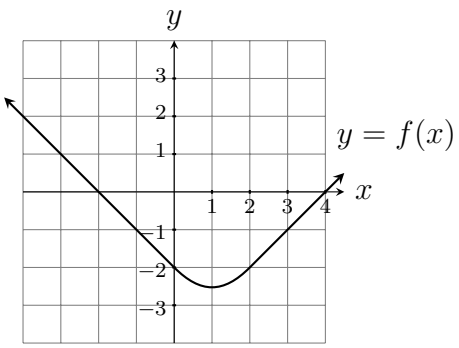
Name: _____

Quiz 23

MATH 200
November 19, 2024

1. Answer the questions about the function $f(x)$ graphed below.



(a) $\displaystyle\int_{-4}^{-2} f(x)\,dx =$

(b) $\displaystyle\int_{2}^{2} f(x)\,dx =$

(c) $\displaystyle\int_{-3}^{0} f(x)\,dx =$

(d) Suppose $\displaystyle\int_{1}^{2} f(x)\,dx = -2.3$. Find $\displaystyle\int_{1}^{4} f(x)\,dx$.

(e) $\displaystyle\lim_{n\to\infty} \sum_{k=1}^{n} f\left(-4 + \frac{2k}{n}\right)\frac{2}{n} =$

2. Suppose for functions f and g we have: $\displaystyle\int_{1}^{7} f(x)\,dx = 4$, $\displaystyle\int_{7}^{9} f(x)\,dx = 5$, $\displaystyle\int_{1}^{9} g(x)\,dx = 6$.

Find $\displaystyle\int_{1}^{9} \big(f(x) - 3g(x)\big)\,dx$

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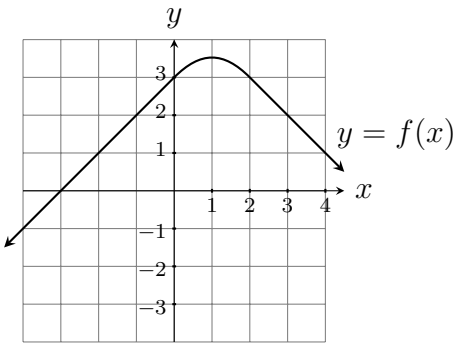

(a) $\displaystyle\int_2^4 f(x)\,dx =$

(b) $\displaystyle\int_{-4}^{-2} f(x)\,dx =$

(c) $\displaystyle\int_3^3 f(x)\,dx =$

(d) Suppose $\displaystyle\int_0^2 f(x)\,dx = 6.6$. Find $\displaystyle\int_0^4 f(x)\,dx$.

(e) $\displaystyle\lim_{n\to\infty}\sum_{k=1}^{n} f\left(-3+\frac{k}{n}\right)\frac{1}{n} =$

2. Suppose for functions f and g we have: $\displaystyle\int_1^4 f(x)\,dx = 1$, $\displaystyle\int_4^6 f(x)\,dx = 2$, $\displaystyle\int_1^6 g(x)\,dx = 3$.

Find $\displaystyle\int_1^6 \big(f(x)+2g(x)\big)\,dx$