

6.7 Definite Integrals

Calculus

Name: _____

CA #1

Find the value of the definite integral.

1. $\int_0^4 (4x + 5) dx$

2. $\int_{-1}^2 \left(3x^2 - \frac{4}{x^2} + 1 \right) dx$

3. $\int_4^{16} -\sqrt{x} dx$

4. $\int_{-\pi}^{\frac{\pi}{2}} (1 - \cos x) dx$

5. $\int_0^{\pi} (3 - \sin x) dx$

Use the given information to find the value of the function.

6. If $g'(x) = \cos x$ and $g(\pi) = 7$, then $g\left(\frac{3\pi}{2}\right) =$

7. Let $h(x)$ be an antiderivative of $x^2 - 2x$. If $h(-3) = 4$, then $h(1) =$

8. Let f be a differentiable function such that $f(2) = 6$ and $f'(x) = 3x^2 - x$. What is the value of $f(3)$?

1. 52	2. 18	3. $-\frac{112}{3}$	4. $\frac{2}{\pi} + 1$	5. $3\pi - 2$	6. 6	7. $21\frac{1}{3} = \frac{64}{3}$	8. 22.5
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Answers to 6.7 CA #1