



LESSON 32

MA 16100 • FALL 2022

DR. HOOD



WARM UP

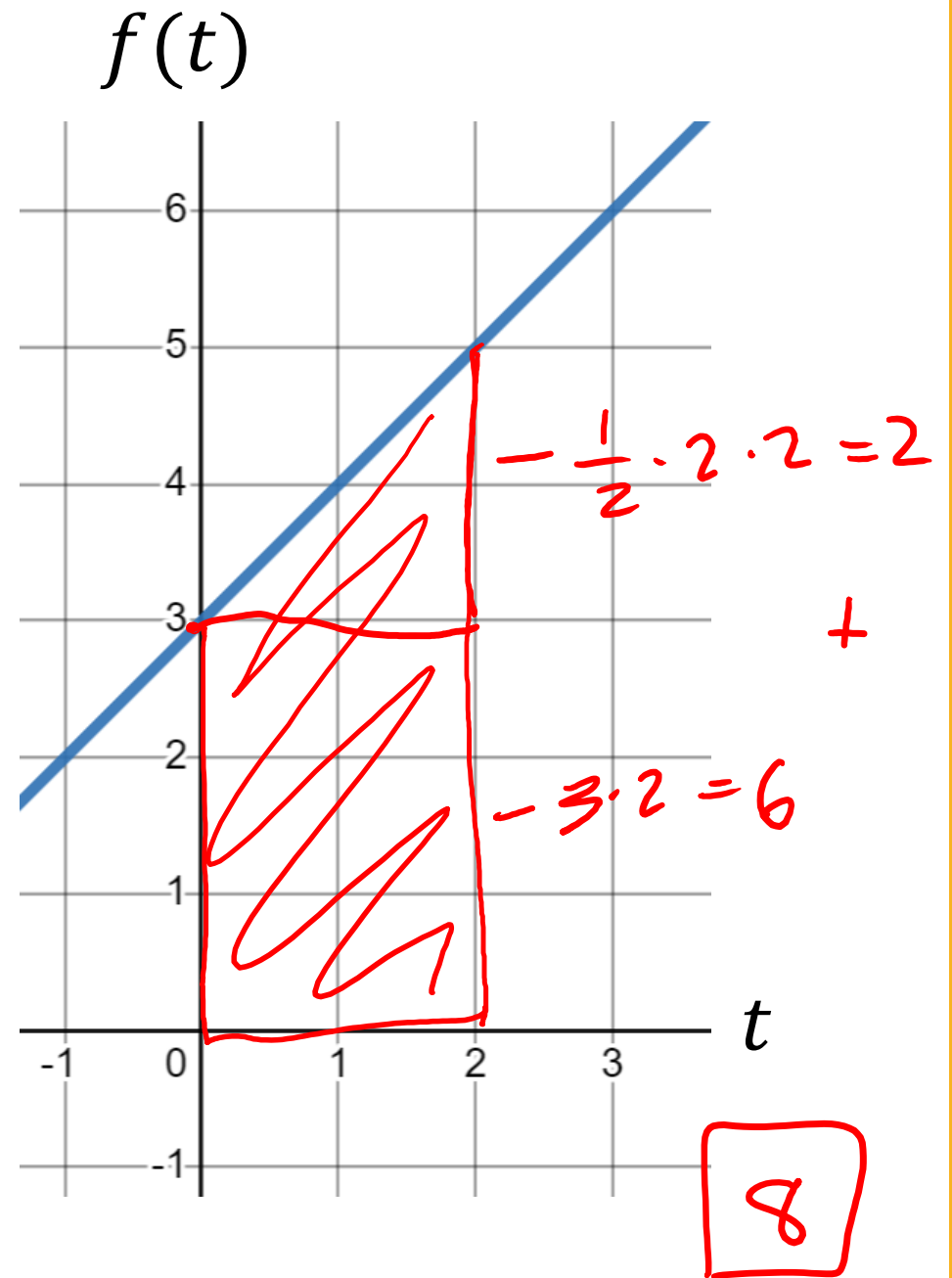
Use geometry to calculate the definite integral:

$$\int_0^2 (3 + t) dt$$

a) 6

b) 2

c) 8



ANNOUNCEMENTS

- Dr. Hood's Office Hours in Math 844
 - Mon, Wed: 3:30-4:30pm
 - Fri: 2:30-3:30pm
- TA's Office Hours in [Math Resource Room](#) (WTHR 313)
 - Mon – Thu: 9:30am – 8:30pm
 - Fri: 9:30am – 3:30pm

THANKSGIVING BREAK

- University Holiday is Wed Nov 23 – Fri Nov 25
- MA 161 additional breaks:
 - No class on Mon Nov 21
 - No recitation on Tue Nov 22
 - No HW or Quizzes that week
 - No Office Hours on Mon Nov 21
 - Math Resource Room closed Mon Nov 21 – Fri Nov 25
 - No SI on Nov 20 – Nov 25

POLL 1

Let $A(x) = \int_0^x \sin(t) dt$.

What is $A'(x)$?

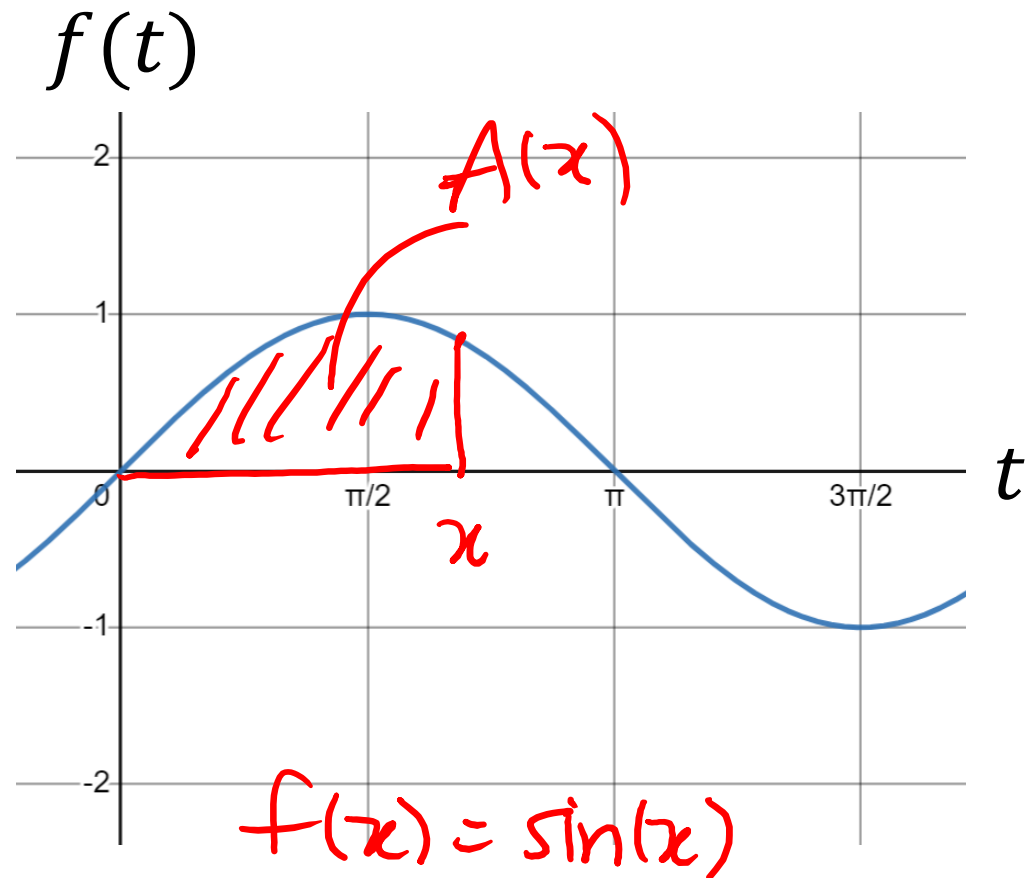
FTC

$$\frac{d}{dx} \int_0^x f(t) dt = f(x)$$

a) $\cos(x)$

b) $\sin(x)$

c) $-\cos(x)$



POLL 2

$$f(x) = \frac{1}{x}$$

$$F(x) = \ln(x)$$

Use the Fundamental Theorem of Calculus to evaluate:

$$\int_3^6 \frac{1}{x} dx = \left[\ln(x) \right]_3^6 = \ln(6) - \ln(3) = \ln\left(\frac{6}{3}\right) = \ln(2)$$

a) $\ln(2)$

b) $-\frac{1}{6}$

c) $\ln(3)$