

Week 11 Friday Homework (1329181)

Question 12345678910111213141516

1. Question DetailsSCalcET6 4.9.004.MI. [1387726]
Find the most general anti-derivative of the function. Use C for any needed constant.

$$f(x) = 3x^6 - 2x^4 + 14x^2$$

$$F(x) = \boxed{} \quad \text{Tutorial}$$

2. Question DetailsSCalcET6 4.9.011. [1291171]
Find the most general antiderivative of the function. Use C for any needed constant. ($x > 0$)

$$f(x) = \frac{6}{x^5}$$

$$F(x) = \boxed{}$$

3. Question DetailsSCalcET6 4.9.018. [1291274]
Find the most general antiderivative of the function. Use C for any needed constant.

$$f(x) = 5\sqrt{x} + 8\cos(x)$$

$$F(x) = \boxed{}$$

4. Question DetailsSCalcET6 4.9.023. [1290974]
Find the most general f . Use C for the constant of the first antiderivative and D for the constant of the second antiderivative.

$$f''(x) = 24x + 12x^2$$

$$f(x) = \boxed{}$$

5. Question DetailsSCalcET6 4.9.026.MI. [1386429]
Find the most general f . Use C for the constant of the first anti-derivative and D for the constant of the second anti-derivative.

$$f''(x) = 4x + \sin x$$

$$f(x) = \boxed{} \quad \text{Tutorial}$$

6. Question DetailsSCalcET6 4.9.033. [1290881]
Find f .

$$f'(t) = 8\cos(t) + (\sec(t))^2$$

$$-\frac{\pi}{2} < t < \frac{\pi}{2}$$

$$f\left(\frac{\pi}{3}\right) = 1$$

$$f(t) = \boxed{}$$

7. Question DetailsSCalcET6 4.9.037. [1289925]
Find f .

$$f''(x) = 12x^2 + 12x + 10$$

$$f(1) = 4$$

$$f'(1) = -3$$

$$f(x) = \boxed{}$$

8. Question DetailsSCalcET6 4.9.039. [1291496]
Find f .

$$f''(\theta) = \sin(\theta) + \cos(\theta)$$

$$f(0) = 3$$

$$f'(0) = 1$$

$$f(\theta) = \boxed{}$$

- 9.** Question DetailsSCalcET6 4.9.040.MI. [1386764]
Find f .

$$f''(t) = \frac{3}{\sqrt{t}}$$

$$f(4) = 20$$

$$f'(4) = 8$$

$$f(t) = \text{[input box]} \quad \text{Tutorial}$$

- 10.** Question DetailsSCalcET6 4.9.041. [1291730]

Find f .

$$f''(x) = 4 - 18x$$

$$f(0) = 7$$

$$f(2) = 9$$

$$f(x) = \text{[input box]}$$

- 11.** Question DetailsSCalcET6 4.9.043. [1289916]

Find f .

$$f''(x) = 4 + \cos(x)$$

$$f(0) = -1$$

$$f\left(\frac{\pi}{2}\right) = 0$$

$$f(x) = \text{[input box]}$$

- 12.** Question DetailsSCalcET6 4.9.044.alt. [1291420]

Find f .

$$f''(x) = 3e^x + 5 \sin(x)$$

$$f'(0) = 2$$

$$f(0) = 1$$

$$f(x) = \text{[input box]}$$

- 13.** Question DetailsSCalcET6 4.9.046. [1291820]

Find f .

$$f'''(x) = \cos(x)$$

$$f(0) = 4$$

$$f'(0) = 7$$

$$f''(0) = 2$$

$$f(x) = \text{[input box]}$$

- 14.** Question DetailsSCalcET6 4.9.059. [1290026]

A particle is moving with the given data. Find the position of the particle.

$$a(t) = t - 2$$

$$s(0) = 3$$

$$v(0) = 3$$

$$s(t) = \text{[input box]}$$

- 15.** Question DetailsSCalcET6 4.9.062. [1291351]

A particle is moving with the given data. Find the position of the particle.

$$a(t) = t^2 - 8t + 4$$

$$s(0) = 0$$

$$s(1) = 11$$

$$s(t) = \text{[input box]}$$

16. Question DetailsSCalcET6 4.9.063. [1291838]

A stone is dropped from the top of a 450 m tower. (Acceleration due to gravity is -9.8 m/s^2 . Ignore air resistance. Give your answers correct to two decimal places.)

(a) Find the distance of the stone above ground level at time t .

$$h(t) = \boxed{}$$

(b) How long does it take the stone to reach the ground?

s

(c) With what speed does it strike the ground?

m/s

(d) If the stone is thrown downward with a speed of 7 m/s, how long does it take to reach the ground?

s

Assignment Details

Name (AD): **Week 11 Friday Homework (1329181)**

Submissions Allowed: **5**

Category: **Homework**

Code:

Locked: **No**

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