1. [–/2 Points] DETAILS SCALCET9 4.9.005.NVA

Find the most general antiderivative of the function. (Check your answer by differentiation. Use C for the constant of the antiderivative.)

$$f(x) = 4x + 5$$

$F(x) =$

Need Help? Watch It

2. [–/2 Points] DETAILS SCALCET9 4.9.008.NVA

Find the most general antiderivative of the function. (Check your answer by differentiation. Use C for the constant of the antiderivative.)

$$f(x) = 6x^5 - 2x^4 - 9x^2$$

$F(x) =$

3. [–/1 Points] DETAILS SCALCET9 4.XP.9.010.NVA

Find the most general antiderivative of the function. (Check your answer by differentiation. Use C for the constant of the antiderivative.)

$$f(x) = \sqrt[5]{x^2} + x\sqrt{x}$$

$F(x) =$

4. [–/1 Points] DETAILS SCALCET9 4.XP.9.013.NVA

Find the most general antiderivative of the function. (Check your answer by differentiation. Use C for the constant of the antiderivative.)

$$f(x) = \frac{2x^4 + 5x^3 - x}{x^3}, \quad x > 0$$

$F(x) =$

Need Help? Watch It

5. [–/1 Points] DETAILS SCALCET9 4.9.033.

Find f. (Use C for the constant of the first antiderivative and D for the constant of the second antiderivative.)

$$f''(x) = 2x + 5e^x$$

$f(x) =$

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6. [–/1 Points] DETAILS SCALCET9 4.XP.9.029.

Find f.

$$f'(x) = 1 + 3\sqrt{x}, \quad f(4) = 28$$

$f(x) =$

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7. [–/1 Points] DETAILS SCALCET9 4.9.045.MI.NVA

Find f.

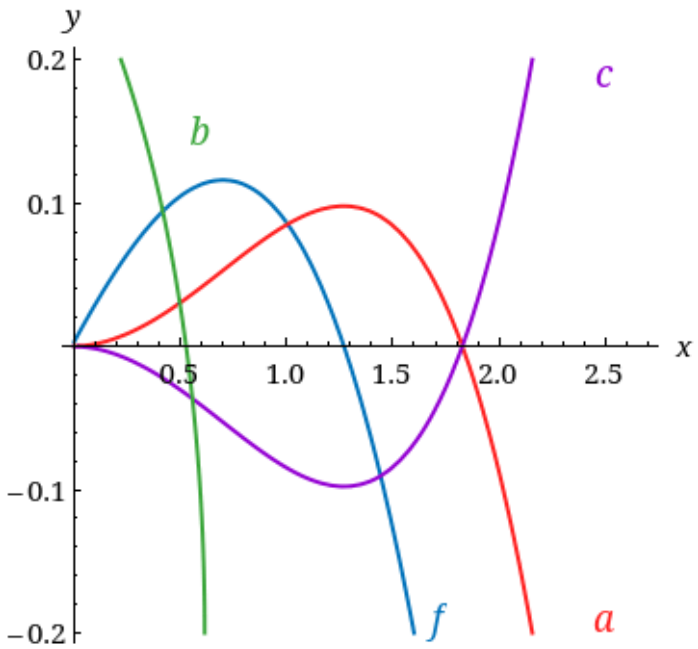
$$f''(x) = -2 + 12x - 12x^2, \quad f(0) = 4, \quad f'(0) = 16$$

$f(x) =$

Need Help? Watch It Master It

8. [–/1 Points] DETAILS SCALCET9 4.9.057.

The graph of a function f is shown. Which graph is an antiderivative of f?



- a
- b
- c

9. [–/1 Points] DETAILS SCALCET9 4.XP.9.039.

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

$v(t) = \sin(t) - \cos(t), \quad s(0) = 4$

$s(t) =$

Need Help? Watch It

10. [–/6 Points] DETAILS SCALCET9 4.9.075.MI.SA.

This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive any points for the skipped part, and you will not be able to come back to the skipped part.

Tutorial Exercise

A stone was dropped off a cliff and hit the ground with a speed of 144 ft/s. What is the height of the cliff? (Use 32 ft/s^2 for the acceleration due to gravity.)

Click here to begin!

11. [–/4 Points] DETAILS SCALCET9 4.9.077.MI.SA.

This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive any points for the skipped part, and you will not be able to come back to the skipped part.

Tutorial Exercise

A company estimates that the marginal cost (in dollars per item) of producing x items is $1.96 - 0.004x$. If the cost of producing one item is $556, find the cost of producing 100 items.

Click here to begin!

12. [–/1 Points] DETAILS SCALCET9 4.XP.9.004.MI.NVA

Find the most general antiderivative of the function. (Check your answer by differentiation. Use C for the constant of the antiderivative.)

$$f(x) = 7x^9 - 2x^6 + 10x^3$$

$F(x) =$

Need Help? Master It

13. [–/1 Points] DETAILS SCALCET9 4.XP.9.021.NVA

Find the most general antiderivative of the function. (Check your answer by differentiation. Use C for the constant of the antiderivative.)

$$f(x) = 4\sqrt{x} + 8\cos(x)$$

$F(x) =$

14. [–/1 Points] DETAILS SCALCET9 4.XP.9.023.MI.

Find the most general antiderivative of the function. (Check your answer by differentiation. Remember the constant of the antiderivative.)

$$f(x) = 5e^x + 4\sec^2(x) \quad \text{on the interval } \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$$

$F(x) =$

Need Help? Master It

15. [–/1 Points] DETAILS SCALCET8 4.9.535.XP.

Find f.

$$f''(t) = 2e^t + 5\sin(t), \quad f(0) = 0, \quad f(\pi) = 0$$

$f(t) =$