

1. (1 point) set4/s2_2_16.pg

If

$$f(x) = \frac{\sqrt{x} - 5}{\sqrt{x} + 5}$$

find $f'(x)$.

Find $f'(2)$.

Answer(s) submitted:

-
-

(incorrect)

Correct Answers:

- $(5/\sqrt{x}) / ((\sqrt{x} + 5) ** 2)$
- 0.0859346227980792

2. (1 point) set4/s2_2_22.pg

If $f(x) = 6 + \frac{7}{x} + \frac{4}{x^2}$, find $f'(x)$.

Find $f'(2)$.

Answer(s) submitted:

-
-

(incorrect)

Correct Answers:

- $-7 * x ** (-2) - 2 * 4 * x ** (-3)$
- -2.75

3. (1 point) set4/ps2prob3.pg

Evaluate the limit

$$\lim_{x \rightarrow 0} \frac{\sin 2x}{9x}$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- 0.222222222222222

4. (1 point) set4/ps2prob4.pg

Evaluate the limit

$$\lim_{x \rightarrow 0} \frac{\sin 8x}{\sin 3x}$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- 2.666666666666667

5. (1 point) set4/ps2prob5.pg

Evaluate the limit

$$\lim_{x \rightarrow 0} \frac{\tan x}{3x}$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- 0.333333333333333

6. (1 point) set4/ps2prob6.pg

Evaluate the limit

$$\lim_{x \rightarrow \infty} \frac{4 + 9x}{4 - 7x}$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- -1.28571428571429

7. (1 point) set4/ps2prob7.pg

Evaluate the limit

$$\lim_{x \rightarrow \infty} \frac{\sqrt{3 + 4x^2}}{(5 + 11x)}$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- 0.181818181818182

8. (1 point) set4/ps2prob8.pg

Evaluate

$$\lim_{x \rightarrow \infty} \sqrt{x^2 - 7x + 1} - x$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- -3.5

9. (1 point) set4/ps2prob9.pgFor what value of the constant c is the function f continuous on $(-\infty, \infty)$ where

$$f(b) = \begin{cases} cb + 1 & \text{if } b \in (-\infty, 6] \\ cb^2 - 1 & \text{if } b \in (6, \infty) \end{cases}$$

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- 0.06666666666666667

10. (1 point) set4/ps3prob7.pgIf $f(x) = (2x^2 - 7)(2x + 5)$, find $f'(x)$.

[NOTE: Your answer should be a function in terms of the variable 'x' and not a number!]

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- $(2 \cdot 2 \cdot x) \cdot (2 \cdot x + 5) + (2 \cdot x^2 - 7) \cdot (2)$

11. (1 point) set4/ps3prob8.pgIf $f(t) = \frac{9}{t^5}$, find $f'(t)$.

[NOTE: Your answer should be a function in terms of the variable 't' and not a number!]

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- $(9) \cdot (-5) \cdot t^{**}(-5-1)$

12. (1 point) set4/ps3prob9.pgIf $f(x) = \frac{5x+6}{4x+2}$, find $f'(x)$.

Find $f'(4)$.

[NOTE: When entering functions, make sure that you put all the necessary *, (,), etc. in your answer.]

Answer(s) submitted:

-

-

(incorrect)

Correct Answers:

- $(5 \cdot 2 - 4 \cdot 6) / (4 \cdot x + 2)^{**2}$
- -0.0432098765432099

13. (1 point) set4/ps3prob10.pgLet $f(x) = 4x^5\sqrt{x} + \frac{5}{x^3\sqrt{x}}$. $f'(x) =$ _____

[NOTE: Your answer should be a function in terms of the variable 'x' and not a number! When entering functions, make sure that you put all the necessary *, (,), etc. in your answer.]

Answer(s) submitted:

-

(incorrect)

Correct Answers:

- $4 \cdot (5 + 1/2) \cdot x^{**}(5 - 1/2) - 5 \cdot (3 + 1/2) / x^{**}(3+3/2)$