WebAssign
Hw 16 (14.7): Maximum and Minimum Values (Homework)

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MA 261 Fall 2012, section 121, Fall 2012
Instructor: David Daniels

Current Score : 20 / 20 **Due :** Thursday, September 27 2012 11:00 PM EDT

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1. 4/4 points | Previous Answers SCalcET7 14.7.011.MI.

Find the local maximum and minimum values and saddle point(s) of the function. If you have three-dimensional graphing software, graph the function with a domain and viewpoint that reveal all the important aspects of the function. (Enter your answers as a comma-separated list. If an answer does not exist, enter DNE.)

$$f(x, y) = x^3 - 108xy + 216y^3$$

local maximum value(s)

local minimum value(s)

saddle point(s) $(x, y, f) =$

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2. 4/4 points | Previous Answers SCalcET7 14.7.012.

Find the local maximum and minimum values and saddle point(s) of the function. If you have three-dimensional graphing software, graph the function with a domain and viewpoint that reveal all the important aspects of the function. (Enter your answers as a comma-separated list. If an answer does not exist, enter DNE.)

$$f(x, y) = xy + \frac{64}{x} + \frac{64}{y}$$

local maximum value(s)

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local minimum value(s)

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Flash Player version 10 or higher is required for this question. You can get Flash Player free from Adobe's website.

saddle point(s) $(x, y, f) =$

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3. 4/4 points | Previous Answers SCalcET7 14.7.014.

Find the local maximum and minimum values and saddle point(s) of the function. If you have three-dimensional graphing software, graph the function with a domain and viewpoint that reveal all the important aspects of the function. (Enter your answers as a comma-separated list. If an answer does not exist, enter DNE.)

$f(x, y) = 3y \cos x, \quad 0 \le x \le 2\pi$

local maximum value(s)

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local minimum value(s)

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saddle point(s) $(x, y, f) =$

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4. 4/4 points | Previous Answers SCalcET7 14.7.015.

Find the local maximum and minimum values and saddle point(s) of the function. If you have three-dimensional graphing software, graph the function with a domain and viewpoint that reveal all the important aspects of the function. (Enter your answers as a comma-separated list. If an answer does not exist, enter DNE.)

$$f(x, y) = 9(x^2 + y^2)e^{y^2 - x^2}$$

local maximum value(s)

local minimum value(s)

saddle point(s) $(x, y, f) =$

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5. 4/4 points | Previous Answers SCalcET7 14.7.016.

Find the local maximum and minimum values and saddle point(s) of the function. If you have three-dimensional graphing software, graph the function with a domain and viewpoint that reveal all the important aspects of the function. (Enter your answers as a comma-separated list. If an answer does not exist, enter DNE.)

$$f(x, y) = 9e^{y}(y^2 - x^2)$$

local maximum value(s)

local minimum value(s)

saddle point(s) $(x, y, f) =$

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