

## Assignment Previewer

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M281 (526907)**

## Previewer Tools

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## About this Assignment

Due: **Tue Mar 17 2009 15:15 PDT****1.** SCalc5 15.8.004. [295118] [Show Details](#)

Use Lagrange multipliers to find the maximum and minimum values of the function subject to the given constraint.

$$f(x,y) = 4x + 6y; x^2 + y^2 = 13$$

Maximum

Minimum

**2.** SCalc5 15.8.006. [295089] [Show Details](#)

Use Lagrange multipliers to find the maximum and minimum values of the function subject to the given constraint.

$$f(x,y) = x^2 + y^2; x^4 + y^4 = 1$$

Maximum

Minimum

**3.** SCalc5 15.8.018. [295117] [Show Details](#)

Find the extreme values of  $f$  on the region described by the inequality.

$$f(x,y) = 2x^2 + 3y^2 - 4x - 5, x^2 + y^2 \leq 16$$

Maximum

Minimum

4. SCalc5 15.8.008. [295148] [Show Details](#)

Use Lagrange multipliers to find the maximum and minimum values of the function subject to the given constraint.

$$f(x,y,z) = 8x - 4z; x^2 + 10y^2 + z^2 = 6$$

Maximum

Minimum

5. SCalc5 15.8.038. [295176] [Show Details](#)

Find the maximum and minimum volumes of a rectangular box whose surface area is 1500 cm<sup>2</sup> and whose total edge length is 200 cm.

Maximum

 cm<sup>3</sup>

Minimum

 cm<sup>3</sup>

6. HW10.1-M281 [848555] [Show Details](#)

**Problem 10.1.** Puffin wishes to construct a rectangular box with no top in which she will put Krill to take to her Aunt. She has cardboard comprising 48 square units to use. She wishes to construct a box with maximum volume. What is the volume of that box?



Is the maximum volume (enter xx.xx)

**7.** HW10.2-M281 [848556] [Show Details](#)

**Problem 10.2.** Find the maximum value of the function  $xyz$  which lies on the ellipsoid  $x^2 + 4y^2 + 9z^2 = 75$ .



is the maximum value of the function (an answer xx.xx is desired)

**8.** HW10.3-M281 [848557] [Show Details](#)

**Problem 10.3.** Find the distance from the ellipse  $3x^2 + 3y^2 + 2xy = 8$  to the origin.



The distance from the closest point on the ellipse to the origin (an

answer x.xxx is desired)

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