WebAssign
Hw 4 (12.6): Quadratic Surfaces (Homework)

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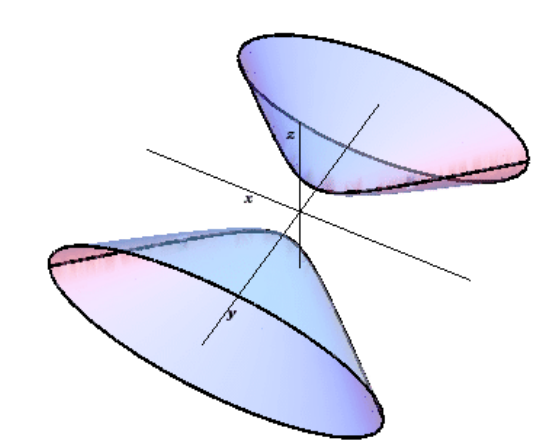
MA 261 Fall 2012, section 121, Fall 2012
Instructor: David Daniels

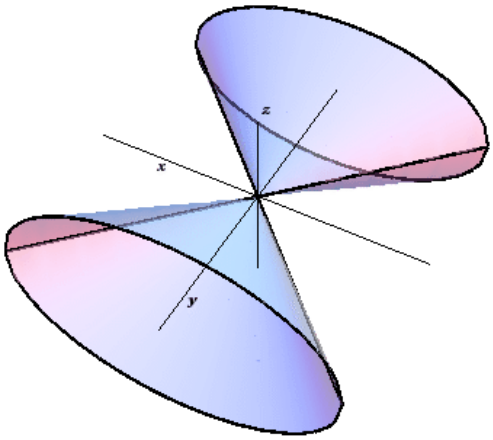
Current Score : 20 / 20 **Due :** Tuesday, August 28 2012 11:00 PM EDT

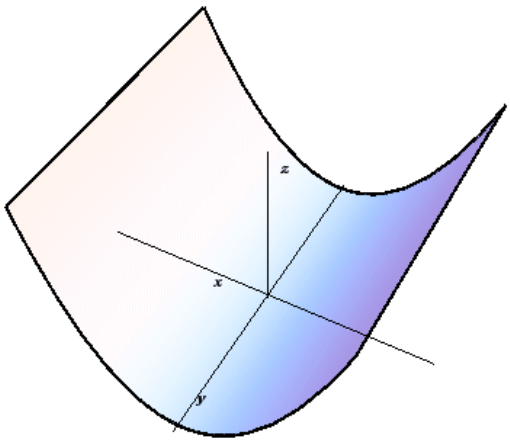
1. 2.5/2.5 points | Previous Answers SCalcET7 12.6.015.

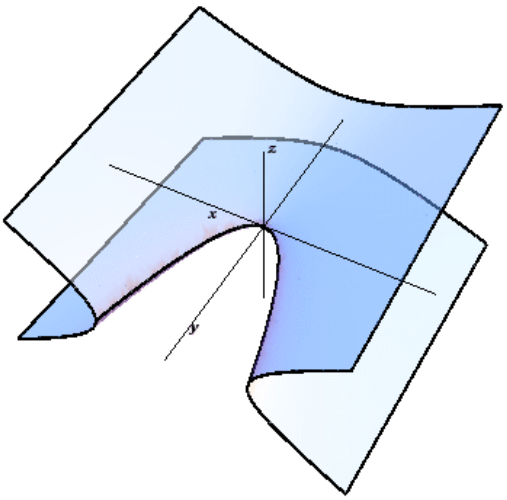
Use traces to sketch the surface.

$-x^2 + 9y^2 - z^2 = 9$









Identify the surface.

- ○ elliptic cone
- ○ ellipsoid
- ○ parabolic cylinder
- ○ elliptic cylinder
- ◉ hyperboloid of two sheets
- ○ hyperbolic paraboloid
- ○ hyperboloid of one sheet
- ○ elliptic paraboloid

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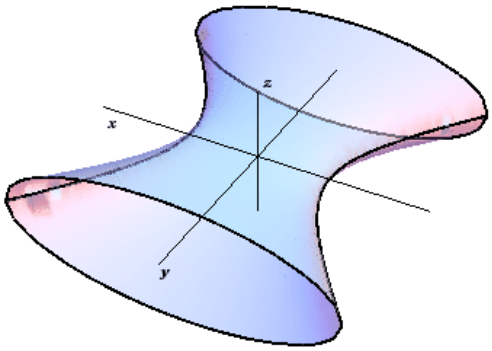
2. 2.5/2.5 points | Previous Answers SCalcET7 12.6.018.

Use traces to sketch the surface.

$3x^2 - 12y^2 + z^2 = 12$



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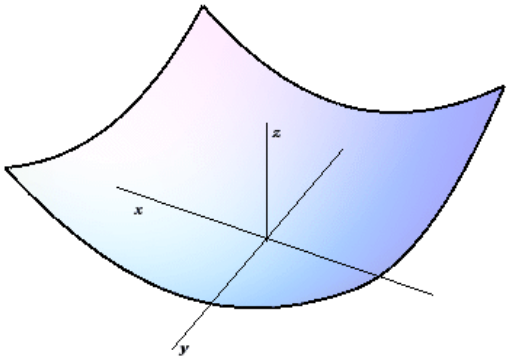

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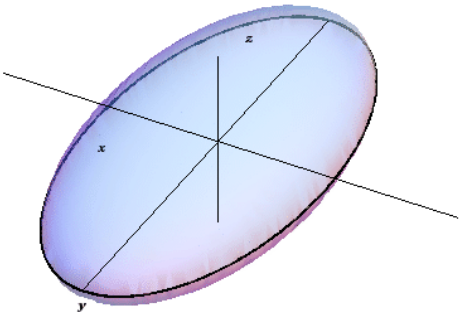

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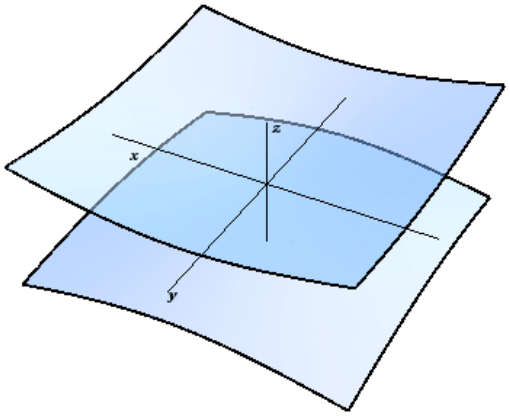

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Identify the surface.

- elliptic cylinder
- ellipsoid
- elliptic cone
- parabolic cylinder
- hyperboloid of one sheet
- hyperboloid of two sheets
- elliptic paraboloid
- hyperbolic paraboloid

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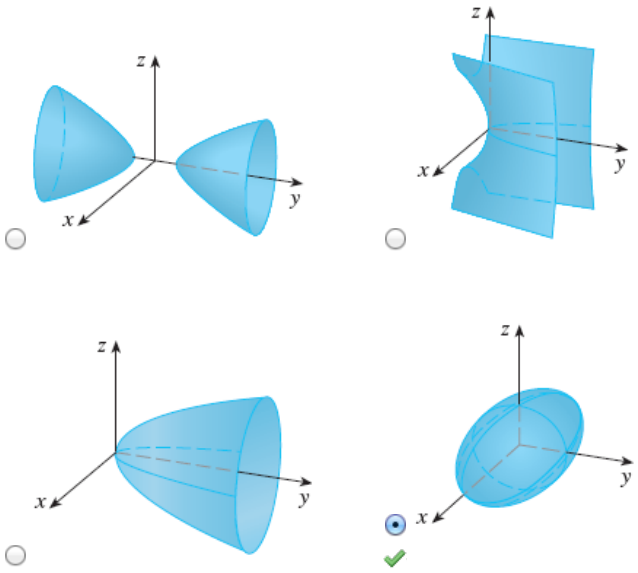
3. 2.5/2.5 points | Previous Answers SCalcET7 12.6.021.

Match the equation with its graph.

$x^2 + 4y^2 + 9z^2 = 1$



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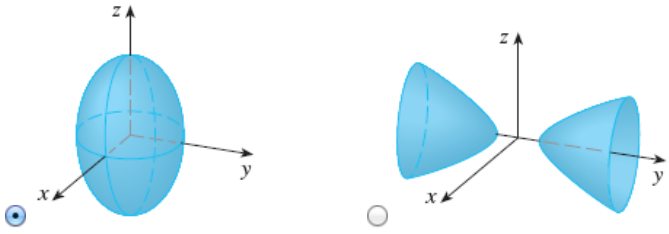
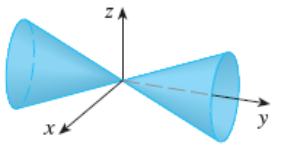
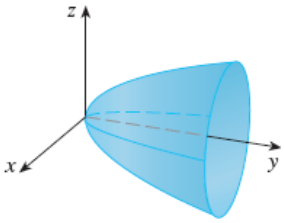
4. 2.5/2.5 points | Previous Answers SCalcET7 12.6.022.

Match the equation with its graph.

$9x^2 + 4y^2 + z^2 = 1$







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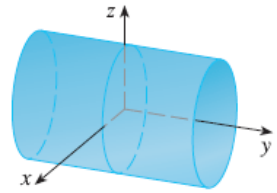
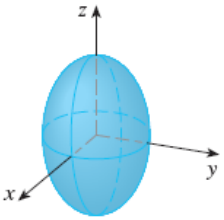
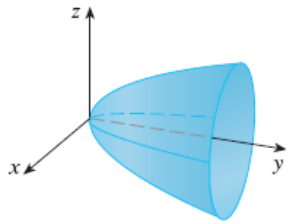
5. 2.5/2.5 points | Previous Answers SCalcET7 12.6.025.

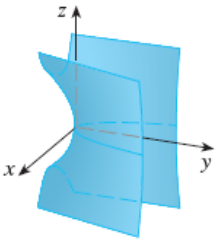
Match the equation with its graph.

$y = 2x^2 + z^2$









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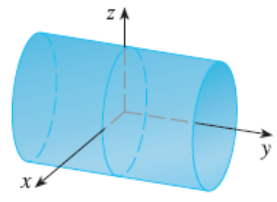
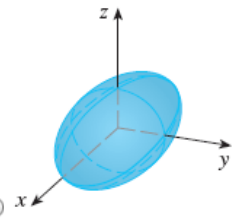
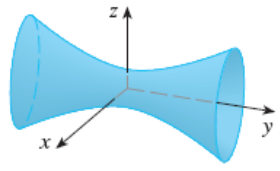
6. 2.5/2.5 points | Previous Answers SCalcET7 12.6.027.

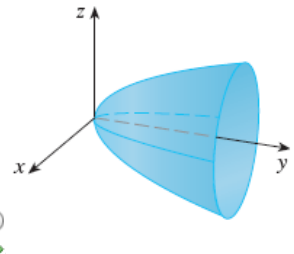
Match the equation with its graph.

$x^2 + 2z^2 = 1$









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7. 2.5/2.5 points | Previous Answers SCalcET7 12.6.031.

Consider the equation below.

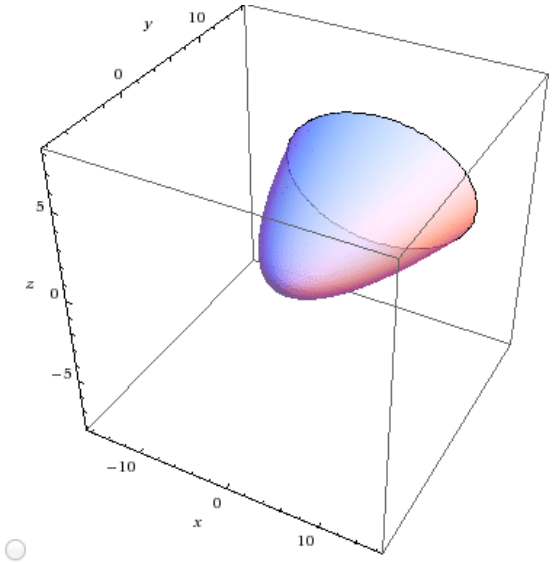
$$x^2 + 8y - 8z^2 = 0$$

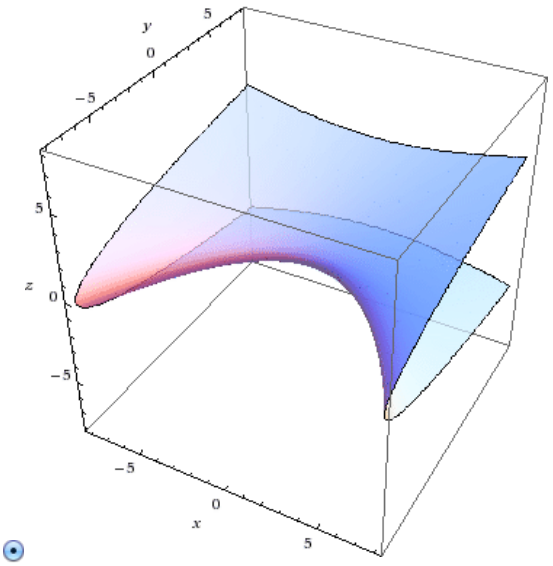
Reduce the equation to one of the standard forms.

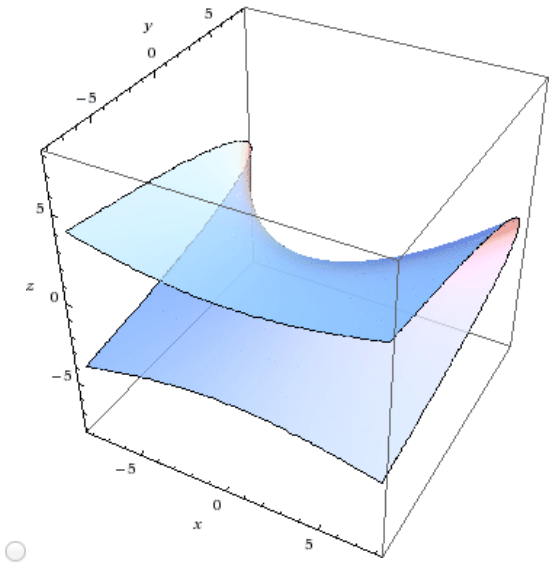
Classify the surface.

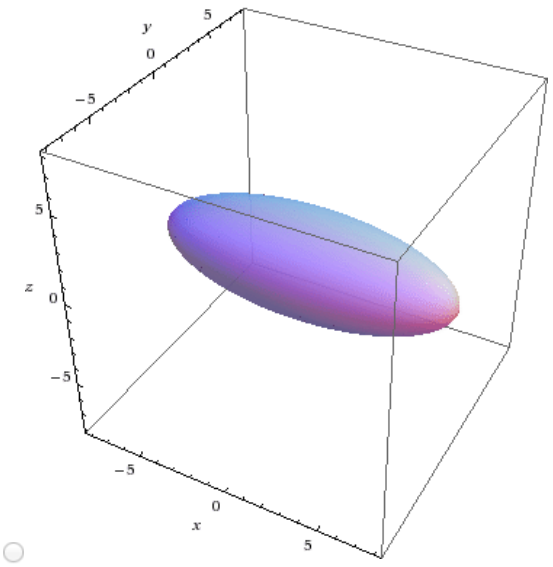
- ellipsoid
- elliptic paraboloid
- hyperbolic paraboloid
- cone
- hyperboloid of one sheet
- hyperboloid of two sheets

Sketch the surface.









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8. 2.5/2.5 points | Previous Answers SCalcET7 12.6.036.

Consider the equation below.

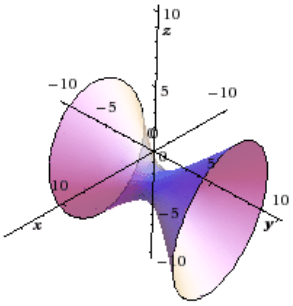
$$x^2 - y^2 + z^2 - 2x + 2y + 4z + 2 = 0$$

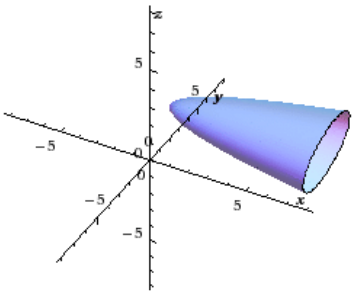
Reduce the equation to one of the standard forms.

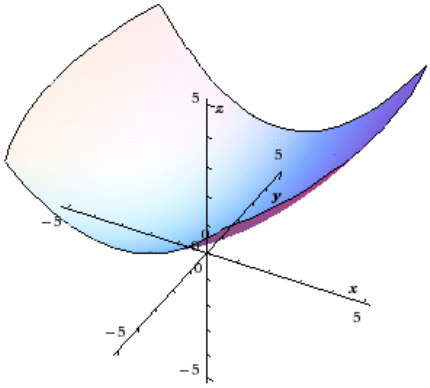
Classify the surface.

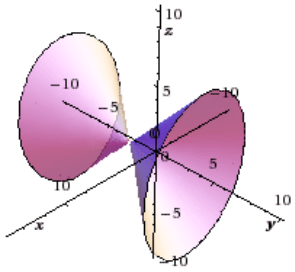
- parabolic cylinder
- ellipsoid
- elliptic paraboloid
- circular cone
- hyperboloid of two sheets
- elliptic cylinder
- hyperboloid of one sheet
- hyperbolic paraboloid

Sketch the surface.









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