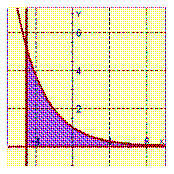
**Quiz Chapter 7 (B1-SP2011)**

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**JavaScript must be enabled to continue!**

Question 1

Marks: 1

The region [\{(x,y)|x\geq -5,\, 0\leq y\leq e^{-x/3}\}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?%5C%7B%28x%2Cy%29%7Cx%5Cgeq+-5%2C%5C%2C+0%5Cleq+y%5Cleq+e%5E%7B-x%2F3%7D%5C%7D)is represented below.  
  
Find the area of this region.   
  
  
  
Select the correct answer.

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 15.88 |  |
|  | b. 15.89 |  |
|  | c. 15.87 |  |
|  | d. 16.08 |  |

Question 2

Marks: 1

Find the area of the region bounded by the hyperbola [9x^2-4y^2=36](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?9x%5E2-4y%5E2%3D36)and the line *x* = 4.

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. None of these |  |
|  | b. [12\sqrt{3}-4\ln(2+\sqrt{3})](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?12%5Csqrt%7B3%7D-4%5Cln%282%2B%5Csqrt%7B3%7D%29) |  |
|  | c. [6(2\sqrt{3}-\ln(2+\sqrt{3}))](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?6%282%5Csqrt%7B3%7D-%5Cln%282%2B%5Csqrt%7B3%7D%29%29) |  |
|  | d. [2\sqrt{3}-\ln(2+\sqrt{3})](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?2%5Csqrt%7B3%7D-%5Cln%282%2B%5Csqrt%7B3%7D%29) |  |

Question 3

Marks: 1

[y=Ce^{4x^2}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?y%3DCe%5E%7B4x%5E2%7D)is the family of solutions to the differential equation [y'=8xy](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?y%27%3D8xy). Find the solution that satisfies the initial condition [y(0)=8](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?y%280%29%3D8)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. [y=-8e^{4x^2}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?y%3D-8e%5E%7B4x%5E2%7D) |  |
|  | b. [y=8e^{4x^2}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?y%3D8e%5E%7B4x%5E2%7D) |  |
|  | c. y=0 |  |
|  | d. [y=\pm 8e^{4x^2}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?y%3D%5Cpm+8e%5E%7B4x%5E2%7D) |  |

Question 4

Marks: 1

The region bounded by the given curves is rotated about the specified axis. Find the volume of the resulting solid by any method.   
  
[x^2+(y-1)^2=1](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?x%5E2%2B%28y-1%29%5E2%3D1)  
  
about the y-axis

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. [2\pi/3](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?2%5Cpi%2F3) |  |
|  | b. [3\pi/2](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?3%5Cpi%2F2) |  |
|  | c. [4\pi/3](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?4%5Cpi%2F3) |  |
|  | d. [5\pi/3](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?5%5Cpi%2F3) |  |

Question 5

Marks: 1

Find the arc length of the curve [y=(e^x+e^{-x}) /2, \, 0\le x\le 1](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?y%3D%28e%5Ex%2Be%5E%7B-x%7D%29+%2F2%2C+%5C%2C+0%5Cle+x%5Cle+1). Round your answer to 4 decimal places.

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 1.5431 |  |
|  | b. 1.7215 |  |
|  | c. None of the other choices is correct |  |
|  | d. 1.1752 |  |
|  | e. 0.5431 |  |

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