**Chapter test 12**

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**JavaScript must be enabled to continue!**

Question 1

Marks: 1

Integrate the function f over the given region.  
  
f(x, y) = sin 15x over the rectangle 0 ≤ x ≤ pi/15, 0 ≤y ≤ π

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. [\pi/15](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\pi/15) |  |
|  | b. [\pi/30](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\pi/30) |  |
|  | c. [2\pi/15](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?2\pi/15) |  |
|  | d. [\pi](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\pi) |  |

Question 2

Marks: 1

Evaluate the integral.  
  
[\int_0^1\int_0^1 (7x+6y)dydx](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\int_0%5e1\int_0%5e1+(7x+6y)dydx)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 13/2 |  |
|  | b. 85/2 |  |
|  | c. 1/2 |  |
|  | d. -1/2 |  |

Question 3

Marks: 1

Find the volume of the given solid over the indicated region R of integration.   
  
f(x, y) = x2 + y2 where R is the region given by 0 ≤ x ≤ 2 and -3 ≤ y ≤ 1.

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 12 |  |
|  | b. 20 |  |
|  | c. 88/3 |  |
|  | d. 48 |  |

Question 4

Marks: 1

Evaluate the integral.  
  
[\int_0^{\pi/2}\int_0^{\pi/2}\int_5^6\rho\sin\phi\, d\rho\, d\phi\, d\theta](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\int_0%5e%7b\pi/2%7d\int_0%5e%7b\pi/2%7d\int_5%5e6\rho\sin\phi\,+d\rho\,+d\phi\,+d\theta)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 11π/6 |  |
|  | b. 11/4 |  |
|  | c. 11/6 |  |
|  | d. 11π/4 |  |

Question 5

Marks: 1

Evaluate the integral.

[ \int_0^{6\pi}\int_0^{15\pi} (\sin x+\cos y)dxdy ](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?+\int_0%5e%7b6\pi%7d\int_0%5e%7b15\pi%7d+(\sin+x+\cos+y)dxdy+)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 7π |  |
|  | b. 6π |  |
|  | c. 12π |  |
|  | d. 13π |  |

Question 6

Marks: 1

Evaluate the integral.  
  
[\int_0^7\int_0^{\sqrt{49-y^2}}\int_0^{7x+14y}dzdxdy](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\int_0%5e7\int_0%5e%7b\sqrt%7b49-y%5e2%7d%7d\int_0%5e%7b7x+14y%7ddzdxdy)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 49 |  |
|  | b. 343 |  |
|  | c. 2401 |  |
|  | d. 16,807 |  |

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