Started on	Saturday, 6 March 2021, 8:12 AM
State	Finished
Completed on	Saturday, 6 March 2021, 8:12 AM
Time taken	12 secs
Grade	**0.00** out of 10.00 (**0%**)

Question **1**

Not answered

Marked out of 1.00

Area of a closed and bounded region R in polar coordinates can be computed by using the following formula:

$A = \int \int_R r \, dr \, d\theta.$

Select one:
- True
- False

The correct answer is 'True'.

Question **2**

Not answered

Marked out of 1.00

$\int \int_R f(x,y) \, dA \leq 0$ if $f(x,y) \geq 0$ on R.

Select one:
- True
- False

The correct answer is 'False'.

Question **3**

Not answered

Marked out of 1.00

The following is a step to compute a prism volume:

$$\int_0^2 \int_0^3 \int_0^{(3-y)/3} dz\, dy\, dx = \int_0^2 \frac{3}{2}\, dx.$$

The number $\dfrac{3}{2}$ in the right hand side of the equation is the area of vertical slice, cut by a plane $x =$ constant.

Select one:

○ True

○ False

The correct answer is 'True'.

Question **4**

Not answered

Marked out of 1.00

$\int\int_R f(x, y)\, dA \geq \int\int_R g(x, y)\, dA$ if $f(x, y) \geq g(x, y)$ on R.

Select one:

○ True
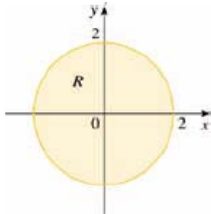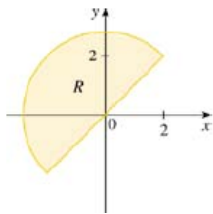
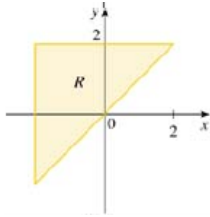○ False

The correct answer is 'True'.

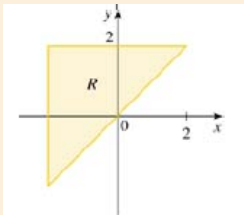Question **5**

Not answered

Marked out of 1.00

For which of the following regions is most suitable for you to use rectangular coordinates?

Select one:

a.

b.

c.

Your answer is incorrect.

The correct answer is:

Question **6**

Not answered

Marked out of 1.00

When changing to double integral in polar coordinates, we consider the following equation:

$\int\int_R f(x,y)\,dA = \int_\alpha^\beta \int_a^b f(r\cos\theta, r\sin\theta)\,dr\,d\theta$

Select one:

○ True

○ False

The correct answer is 'False'.

Question **7**

Not answered

Marked out of 1.00

Consider $D = \{(x,y)|c \leq y \leq d, h_1(y) \leq x \leq h_2(y)\}$ for double integration. What type of region is D?

Select one:

○ a. Type II

○ b. Type I

Your answer is incorrect.

The correct answer is:
Type II

Question **8**

Not answered

Marked out of 1.00

A triple integral will always give a positive result.

Select one:

○ True

○ False

The correct answer is 'False'.

Question **9**

Not answered

Marked out of 1.00

In spherical coordinate, identify the surface with equation $r^2 + z^2 = 49$.

Select one:

  ⊙ a. A sphere with radius 7 centered at the origin.

  ⊙ b. A cylinder with radius 7 centered at the origin.

  ⊙ c. A cone with radius 7 centered at the origin.

> Your answer is incorrect.
>
> The correct answer is:
> A sphere with radius 7 centered at the origin.

Question **10**

Not answered

Marked out of 1.00

Change the point $(3, -3, 5)$ from rectangular coordinates to cylindrical coordinates.

Select one:

  ⊙ a. $\left(3\sqrt{2}, -\dfrac{\pi}{4}, 5\right)$

  ⊙ b. $\left(7, \dfrac{7\pi}{4}, 5\right)$

  ⊙ c. $\left(-3\sqrt{2}, \dfrac{3\pi}{4}, 5\right)$

> Your answer is incorrect.
>
> The correct answer is:
> $\left(3\sqrt{2}, -\dfrac{\pi}{4}, 5\right)$