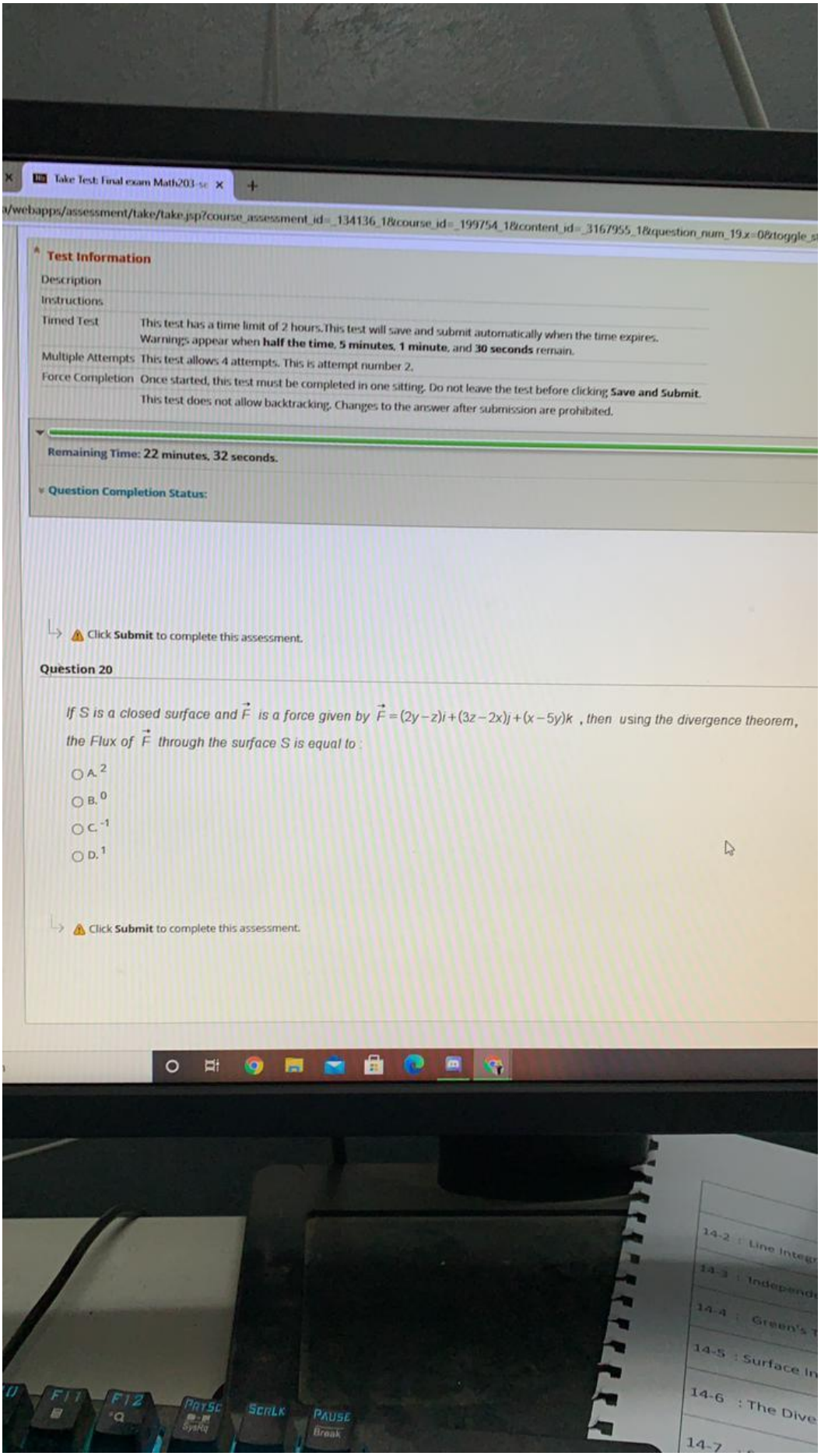

Take Test: Final exam Math203

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Test Information

Description	
Instructions	
Timed Test	This test has a time limit of 2 hours. This test will save and submit automatically when the time expires. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	This test allows 4 attempts. This is attempt number 2.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**. This test does not allow backtracking. Changes to the answer after submission are prohibited.

Remaining Time: 22 minutes, 32 seconds.

Question Completion Status:

Click **Submit** to complete this assessment.

Question 20

If S is a closed surface and $\vec{F}$ is a force given by $\vec{F}=(2y-z)i+(3z-2x)j+(x-5y)k$, then using the divergence theorem, the Flux of $\vec{F}$ through the surface S is equal to :

- A. 2
- B. 0
- C. -1
- D. 1

Click **Submit** to complete this assessment.

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14-3 : Independ
14-4 : Green's T
14-5 : Surface In
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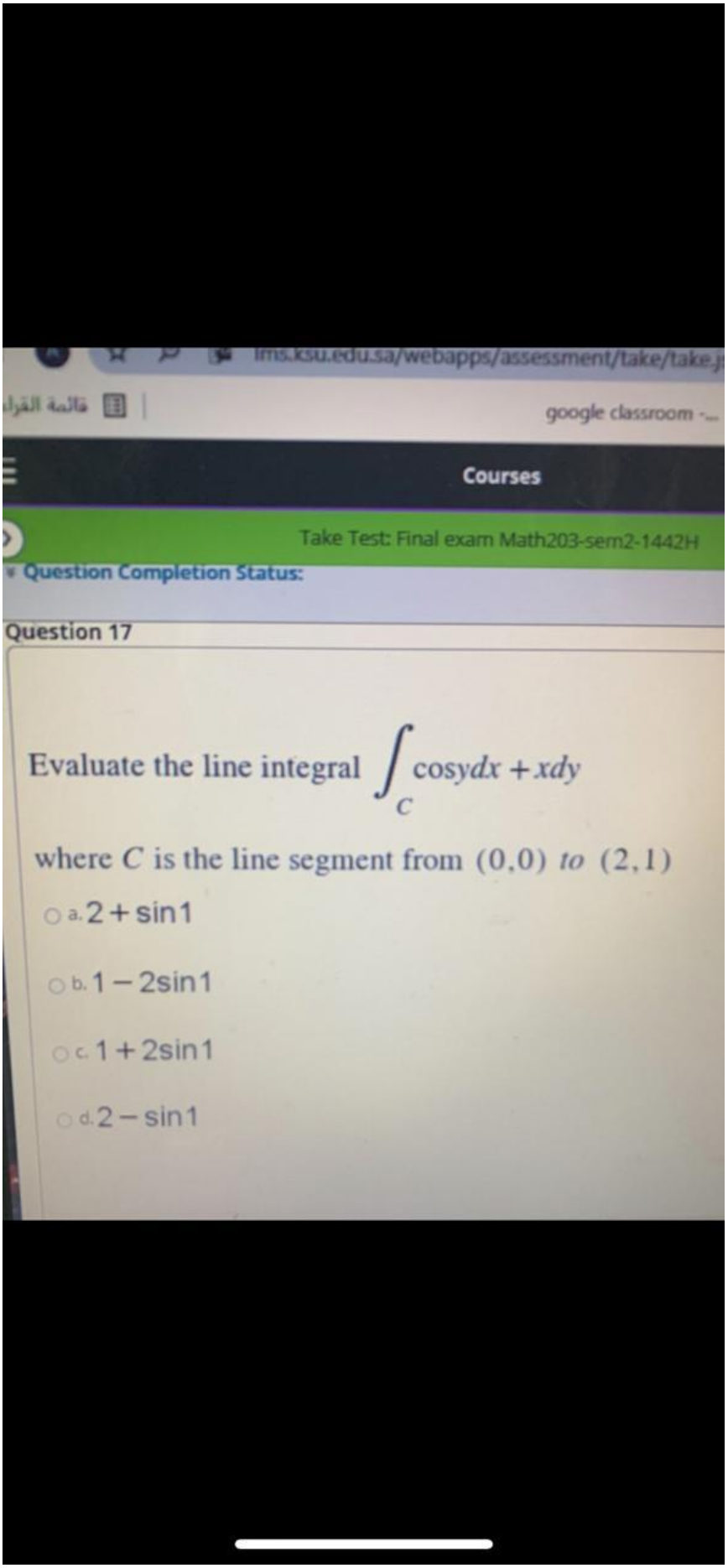
14-7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Take Test: Final exam Math203-sem2-1442H
Question Completion Status:
Question 17
Evaluate the line integral $\int_C \cos y dx + x dy$
where C is the line segment from $(0,0)$ to $(2,1)$
a. $2+\sin 1$
b. $1-2\sin 1$
c. $1+2\sin 1$
d. $2-\sin 1$

This test does not allow backtracking. Changes to the answe

Remaining Time: 01 minute, 20 seconds.

Question Completion Status:

Moving to the next question prevents changes to this answer.

Question 18

The Maclaurin series for $f(x) = \cos(x^2)$ is

A. None of the above.

B. $1 - \frac{x^4}{2!} + \frac{x^8}{4!} - \ldots + (-1)^n \frac{x^{4n}}{(2n)!} + \ldots$

C. $1 - \frac{x^4}{4!} + \frac{x^8}{8!} - \ldots + (-1)^n \frac{x^{4n}}{(4n)!} + \ldots$

D. $1 + \frac{x^4}{2!} + \frac{x^8}{4!} + \ldots + \frac{x^{4n}}{(2n)!} + \ldots$

Moving to the next question prevents changes to this answer.

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Remaining Time: 22 minutes, 59 seconds.

Question Completion Status:

Moving to the next question prevents changes to this answer.

Question 19

Use Green's theorem to evaluate

$\int_C ydx + (y-x)dy$ where C is the triangle with vertices (0;0), (0;1), (2:1)

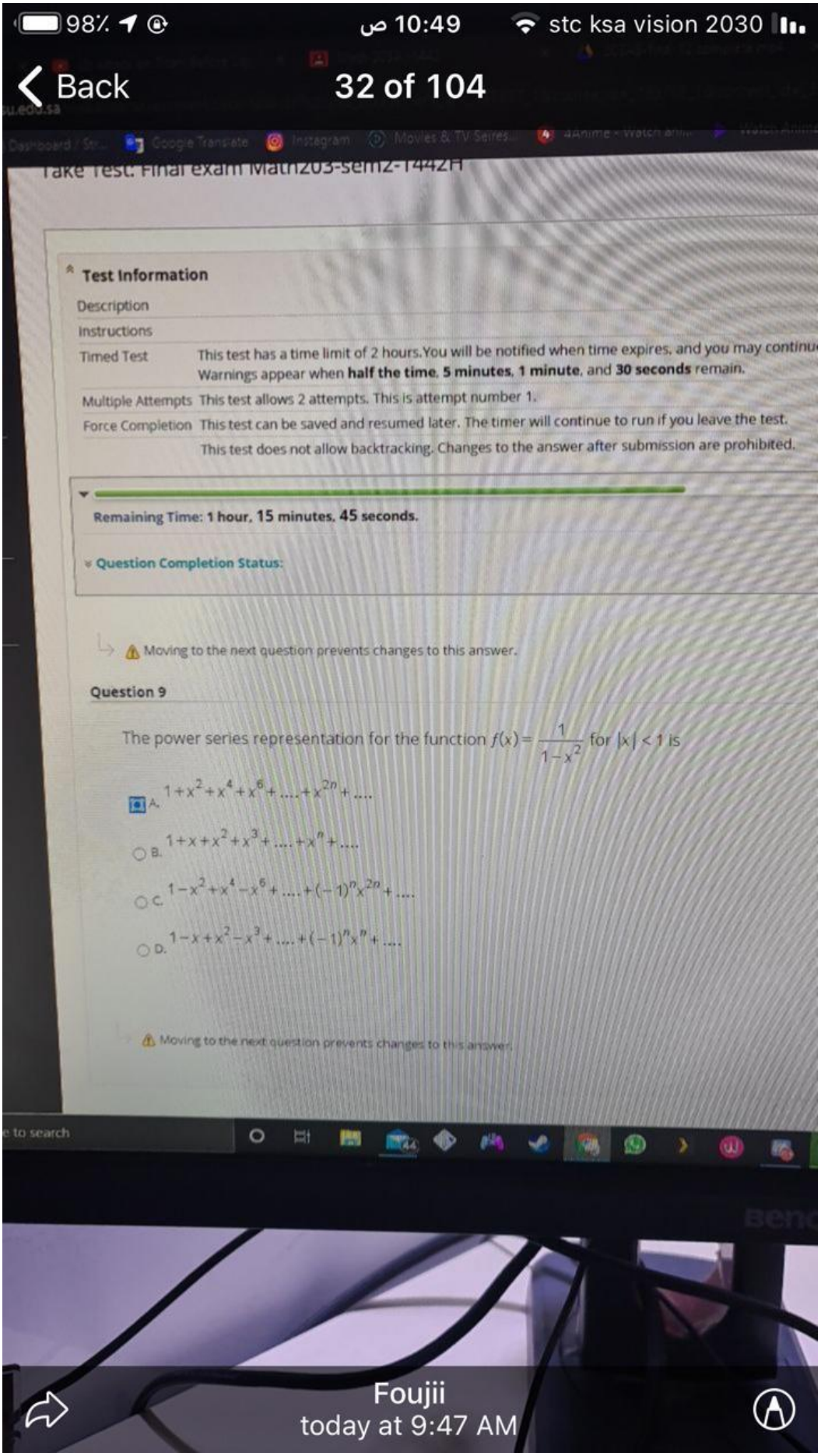
a. -2

b. -1

c. 2

d. 1

Moving to the next question prevents changes to this answer.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32 of 104
Take Test: Final exam Math203-Sem2-1442H
Test Information
Description
Instructions
Timed Test
This test has a time limit of 2 hours. You will be notified when time expires, and you may continu
Warnings appear when half the time, 5 minutes, 1 minute, and 30 seconds remain.
Multiple Attempts
This test allows 2 attempts. This is attempt number 1.
Force Completion
This test can be saved and resumed later. The timer will continue to run if you leave the test.
This test does not allow backtracking. Changes to the answer after submission are prohibited.
Remaining Time: 1 hour, 15 minutes, 45 seconds.
Question Completion Status:
Moving to the next question prevents changes to this answer.
Question 9
The power series representation for the function $f(x)=\frac{1}{1-x^2}$ for $|x|<1$ is
A. $1+x^2+x^4+x^6+\ldots+x^{2n}+\ldots$
B. $1+x+x^2+x^3+\ldots+x^n+\ldots$
C. $1-x^2+x^4-x^6+\ldots+(-1)^n x^{2n}+\ldots$
D. $1-x+x^2-x^3+\ldots+(-1)^n x^n+\ldots$
Moving to the next question prevents changes to this answer.
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Question 15

Which of the following value is the surface integral of the fu

A. $\frac{\pi}{12}(5^{\frac{3}{2}}-1)$

B. $\frac{\pi}{6}(5^{\frac{3}{2}}-1)$

C. $\frac{\pi}{6}(1-5^{\frac{3}{2}})$

D. $\frac{\pi}{6}(17^{\frac{3}{2}}-1)$

⚠ Moving to the next question prevents changes to this answer.

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Test Information

Description	
Instructions	
Timed Test	This test has a time limit of 2 hours.This test will save and submit automatically when the time expires. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	This test allows 4 attempts. This is attempt number 2.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and S**
	This test does not allow backtracking. Changes to the answer after submission are prohibited.

Remaining Time: 39 minutes, 43 seconds.

Question Completion Status:

⚠ Moving to the next question prevents changes to this answer.

Question 16

It is known that surface area of a sphere of radius $a>0$ *is* $4\pi a^2$. *If S is the surface of the hemisphere* $z=\sqrt{25-x^2-y^2}$ *that has unit normal vector* $\vec{n}=\frac{x}{5}i+\frac{y}{5}j+\frac{z}{5}k$ *and the force* $\vec{F}=xi+yj+zk$, *then Flux of* $\vec{F}$ *through the surface S is*

- A. 250π
- B. 50π
- C. 100π
- D. 25π

⚠ Moving to the next question prevents changes to this answer.

⚠ Moving to the next question prevents changes to this answer.

Question 17

If V is the volume of the solid Q bounded by the surfaces $z=x^2+y^2$, $z^2=x^2+y^2$, then $V=$

- A. $V=\frac{\pi}{12}$
- B. $V=\frac{\pi}{6}$
- C. $V=\frac{\pi}{3}$
- D. $V=\pi$

⚠ Moving to the next question prevents changes to this answer.

Multiple Attempts This test allows 4 attempts. This is attempt number 2.

Force Completion Once started, this test must be completed in one sitting. Do not leave the test before

This test does not allow backtracking. Changes to the answer after submission are p

Remaining Time: 18 minutes, 14 seconds.

Question Completion Status:

Click **Submit** to complete this assessment.

Question 20

Let $\sum_{n=1}^{+\infty} \frac{(2x-3)^n}{n^3}$ a power series, find the interval **I** and the radius **r** of the convergence.

- a. $I=]-1,1], r=1/2$
- b. $I=[1,2], r=\frac{1}{2}$
- c. $I=\mathbb{R}, r=\infty$
- d. $I=]-1,1[, r=1$

Click **Submit** to complete this assessment.

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This test does not allow backtracking. Changes to the answer after submission are prohibited.

Remaining Time: 14 minutes, 42 seconds.

Question Completion Status:

Moving to the next question prevents changes to this answer.

Question 17

Changing to spherical coordinates the integral $\int_0^1 \int_0^{\sqrt{1-x^2}} \int_{\sqrt{x^2+y^2}}^{\sqrt{2-x^2-y^2}} (x^2+y^2+z^2)^{3/2}\,dz\,dy\,dx$, w

A. $\int_0^{\pi/2} \int_0^{\pi/4} \int_0^2 \rho^5 \sin\varphi\, d\rho\, d\varphi\, d\theta$

B. $\int_0^{\pi} \int_0^{\pi} \int_0^{\sqrt{2}} \rho^5 \sin\varphi\, d\rho\, d\varphi\, d\theta$

C. $\int_0^{\pi/2} \int_0^{\pi/4} \int_0^{\sqrt{2}} \rho^5 \sin\varphi\, d\rho\, d\varphi\, d\theta$

D. $\int_0^{\pi} \int_0^{\pi/2} \int_0^{\sqrt{2}} \rho^5 \sin\varphi\, d\rho\, d\varphi\, d\theta$

Question 11

If m is the mass of the solid bounded by : $x+y+z=$

A. $m=\frac{a^6}{6}$

B. $m=\frac{a^3}{6}$

C. $m=\frac{a^3}{3}$

D. $m=\frac{a^3}{12}$

Moving to the next question prevents changes to this answer

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Test Information

Description	
Instructions	
Timed Test	This test has a time limit of 2 hours.This test will save and submit automatically when the time expires. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	This test allows 4 attempts. This is attempt number 2.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submi**
	This test does not allow backtracking. Changes to the answer after submission are prohibited.

Remaining Time: 54 minutes, 00 seconds.

Question Completion Status:

⚠ Moving to the next question prevents changes to this answer.

Question 13

The surface area of S where S is the part of the paraboloid $z = x^2 + y^2$ cut off by the plane $z=9$ is

A. $\frac{\pi}{6}\left(37^{3/2} - 1\right)$

B. $\frac{\pi}{12}\left(37^{1/2} - 1\right)$

C. $\frac{\pi}{6}\left(37^{1/2} - 1\right)$

D. $\frac{\pi}{12}\left(37^{3/2} - 1\right)$

⚠ Moving to the next question prevents changes to this answer.

The series $\sum_{n\geq 1} \frac{(-1)^n (n!)^2}{(2n)!}$

- A. Absolutely convergent
- B. None of the above
- C. Divergent
- D. Conditionally convergent

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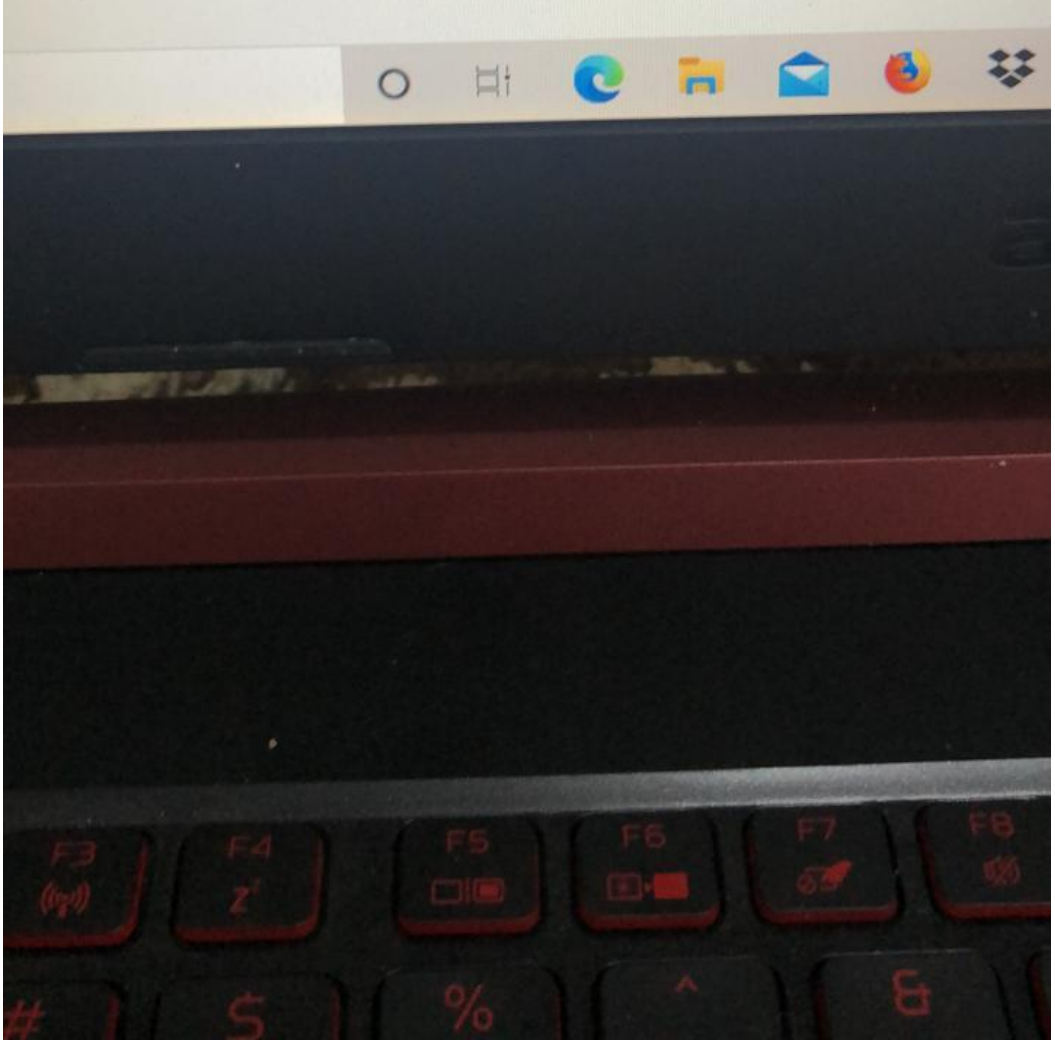

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Question 5

Which of the following value is the surface integral of the function $f(x,y)=1$ over the portion of the paraboloid $z=4-x^2-y^2$ with $z\geq 0$?

A. $\frac{\pi}{6}(1-5^{\frac{3}{2}})$

B. $\frac{\pi}{12}(5^{\frac{3}{2}}-1)$

C. $\frac{\pi}{6}(5^{\frac{3}{2}}-1)$

D. $\frac{\pi}{6}(17^{\frac{3}{2}}-1)$

⚠ Moving to the next question prevents changes to this answer.

⚠ Moving to the next question prevents changes to this answer.

Question 5

If V is the volume of the solid Q bounded by the surfaces

$x^2+y^2=2$, $y=\sqrt{x}$, $y=0$, $z=0$, $z=15x$, then $V=$

a. $V=22$

b. $V=1.1$

c. $V=11$

d. $V=2.2$

⚠ Moving to the next question prevents changes to this answer.