Quiz Week 2 Results

Sec. Ex. 43 - 10.4 Section Exercise 43	16.67%
Example 9 - 10.5 Example 9	77.78%
Sec. Ex. 5a - 10.5 Section Exercise 5a	83.33%
Sec. Ex. 9a - Vectors	[illegible]
Sec. Ex. 39 - 10.5 Section Exercise 39	83.33%
Example 1 - 10.6 Example 1	88.89%
Example 3 - 10.6 Example 3	100.00%
Example 6 - 10.6 Example 6	88.89%
Example 8 - 10.6 Example 8	94.44%
Sec. Ex. 55 - 10.6 Section Exercise 55	77.78%

Date: 9/9/14

Speaker/Presenter: Angad Chadha

Writer/Prep: Varun Jain

Leader/Collaborator: Jason Deleon

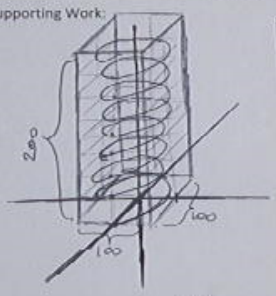
Independant Variable (x-axis):

Dependant Variable (y-axis):

Conclusion (in words):

The amount of gold needed to make the railing of the spiral staircase is 6286.4 ft

Supporting Work:



$x^2 + y^2 = r^2 = 2500$

$x = 50\cos t$

$y = 50\sin t$

$z = \frac{10t}{2\pi}$

$\vec{r}(t) = \langle 50\cos t, 50\sin t, \frac{10t}{2\pi} \rangle$

$\vec{r}'(t) = \langle -50\sin t, 50\cos t, \frac{10}{2\pi} \rangle$

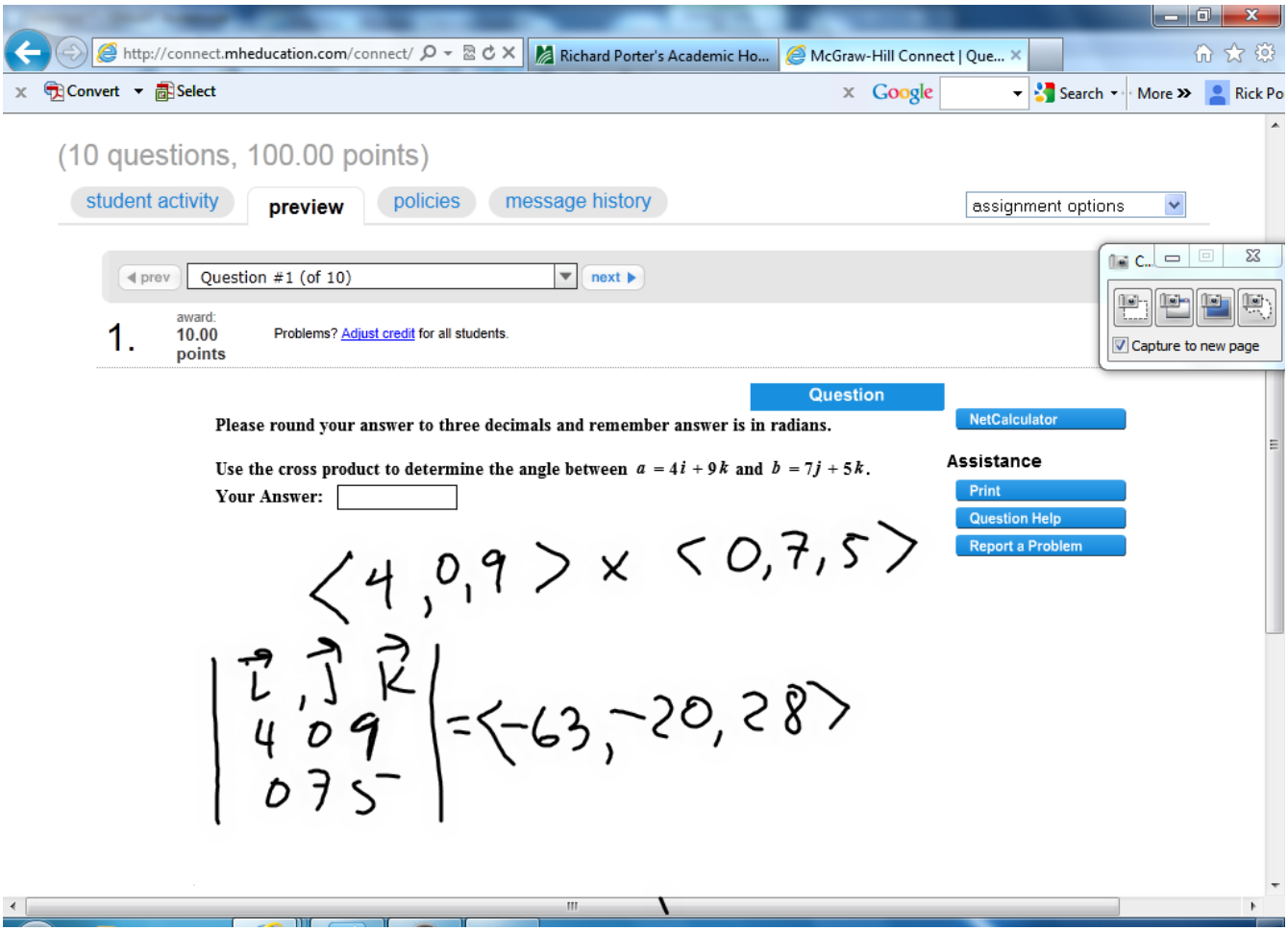
$z = 200 = \frac{10t}{2\pi}$

$400\pi = 10t$

$t = 40\pi$

arc length $= \int_0^{40\pi} \sqrt{2500 + \frac{100}{4\pi^2}}\, dt$

$= \boxed{6286.4 \text{ ft of gold railing}}$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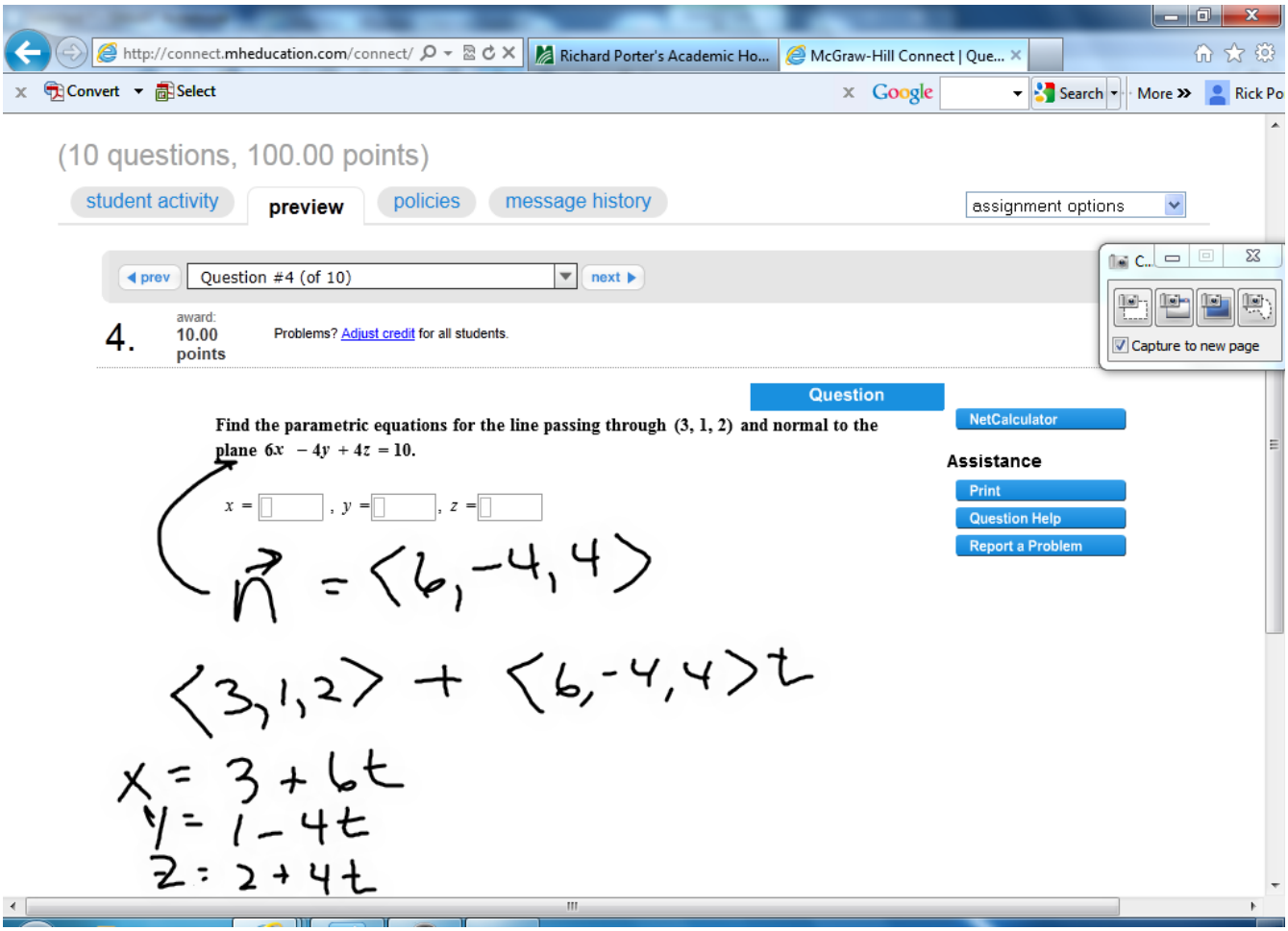
policies
message history
assignment options
prev
Question #1 (of 10)
next
1.
award:
10.00
points
Problems? Adjust credit for all students.
Capture to new page
Question
Please round your answer to three decimals and remember answer is in radians.
Use the cross product to determine the angle between $a = 4i + 9k$ and $b = 7j + 5k$.
Your Answer:
NetCalculator
Assistance
Print
Question Help
Report a Problem
<4,0,9> x <0,7,5>
i j k
4 0 9
0 7 5
=<-63,-20,28>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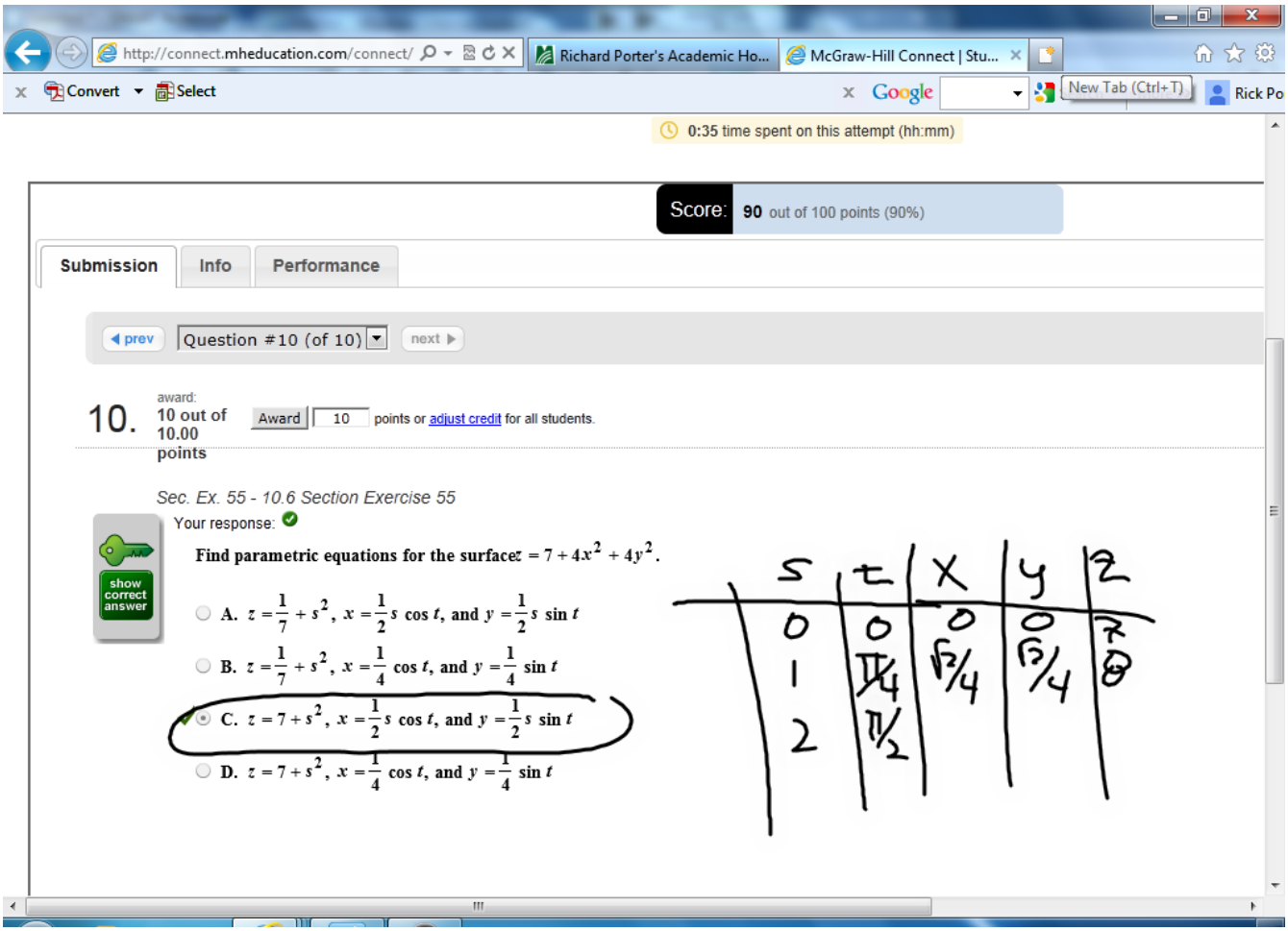
Question #4 (of 10)
next
4.
award:
10.00
points
Problems? Adjust credit for all students.
Capture to new page
Question
Find the parametric equations for the line passing through (3, 1, 2) and normal to the plane 6x − 4y + 4z = 10.
NetCalculator
Assistance
Print
Question Help
Report a Problem
x = , y = , z =
n = ⟨6, −4, 4⟩
⟨3, 1, 2⟩ + ⟨6, −4, 4⟩t
x = 3 + 6t
y = 1 − 4t
z = 2 + 4t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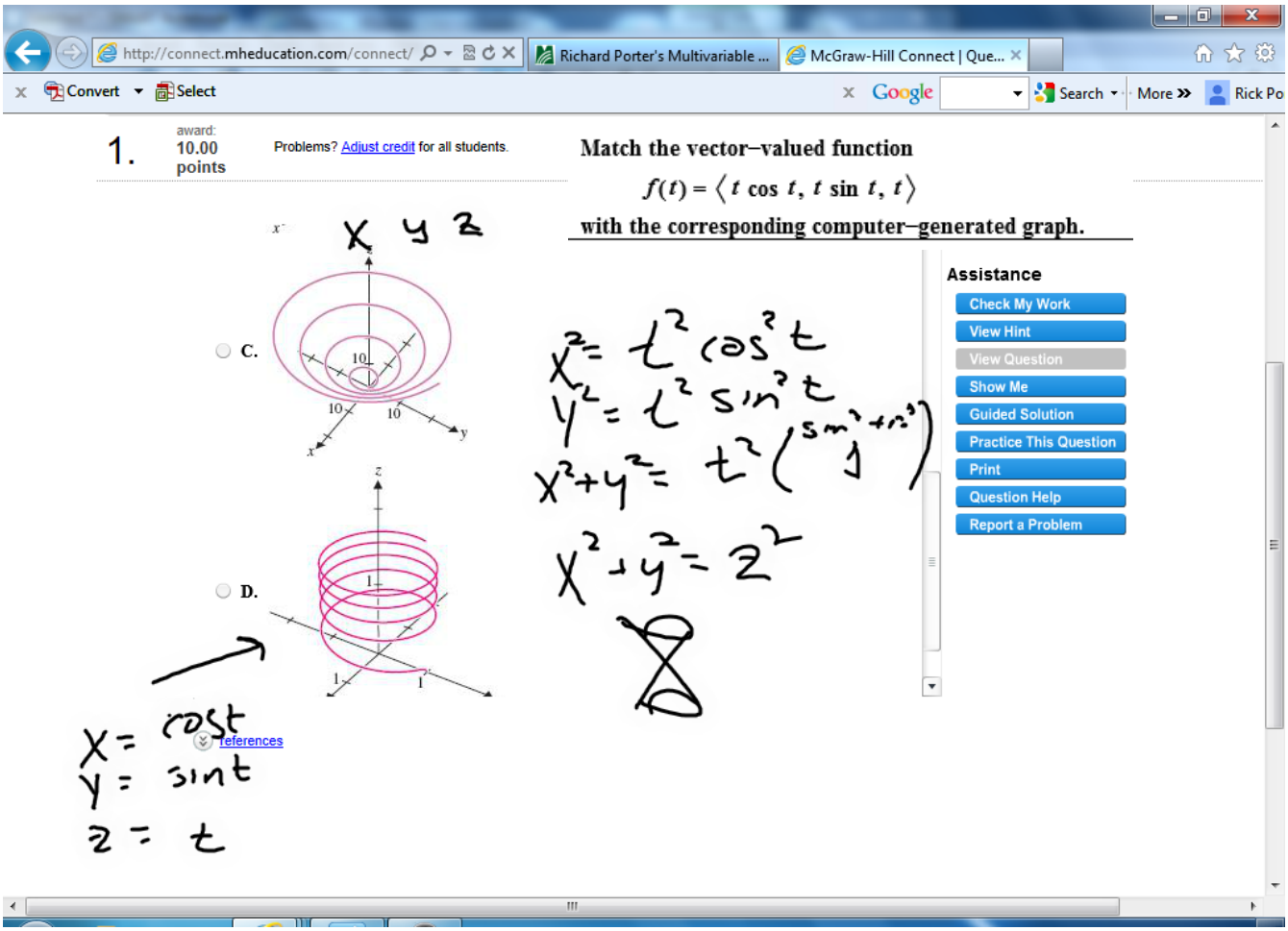
0:35 time spent on this attempt (hh:mm)
Score: 90 out of 100 points (90%)
Submission
Info
Performance
prev
Question #10 (of 10)
next
10.
award:
10 out of 10.00 points
Award
10
points or adjust credit for all students.
Sec. Ex. 55 - 10.6 Section Exercise 55
Your response:
show correct answer
Find parametric equations for the surface $z = 7 + 4x^2 + 4y^2$.
A. $z = \frac{1}{7} + s^2$, $x = \frac{1}{2}s \cos t$, and $y = \frac{1}{2}s \sin t$
B. $z = \frac{1}{7} + s^2$, $x = \frac{1}{4} \cos t$, and $y = \frac{1}{4} \sin t$
C. $z = 7 + s^2$, $x = \frac{1}{2}s \cos t$, and $y = \frac{1}{2}s \sin t$
D. $z = 7 + s^2$, $x = \frac{1}{4} \cos t$, and $y = \frac{1}{4} \sin t$
s
t
X
y
z
0
0
0
0
7
1
π/4
√2/4
√2/4
8
2
π/2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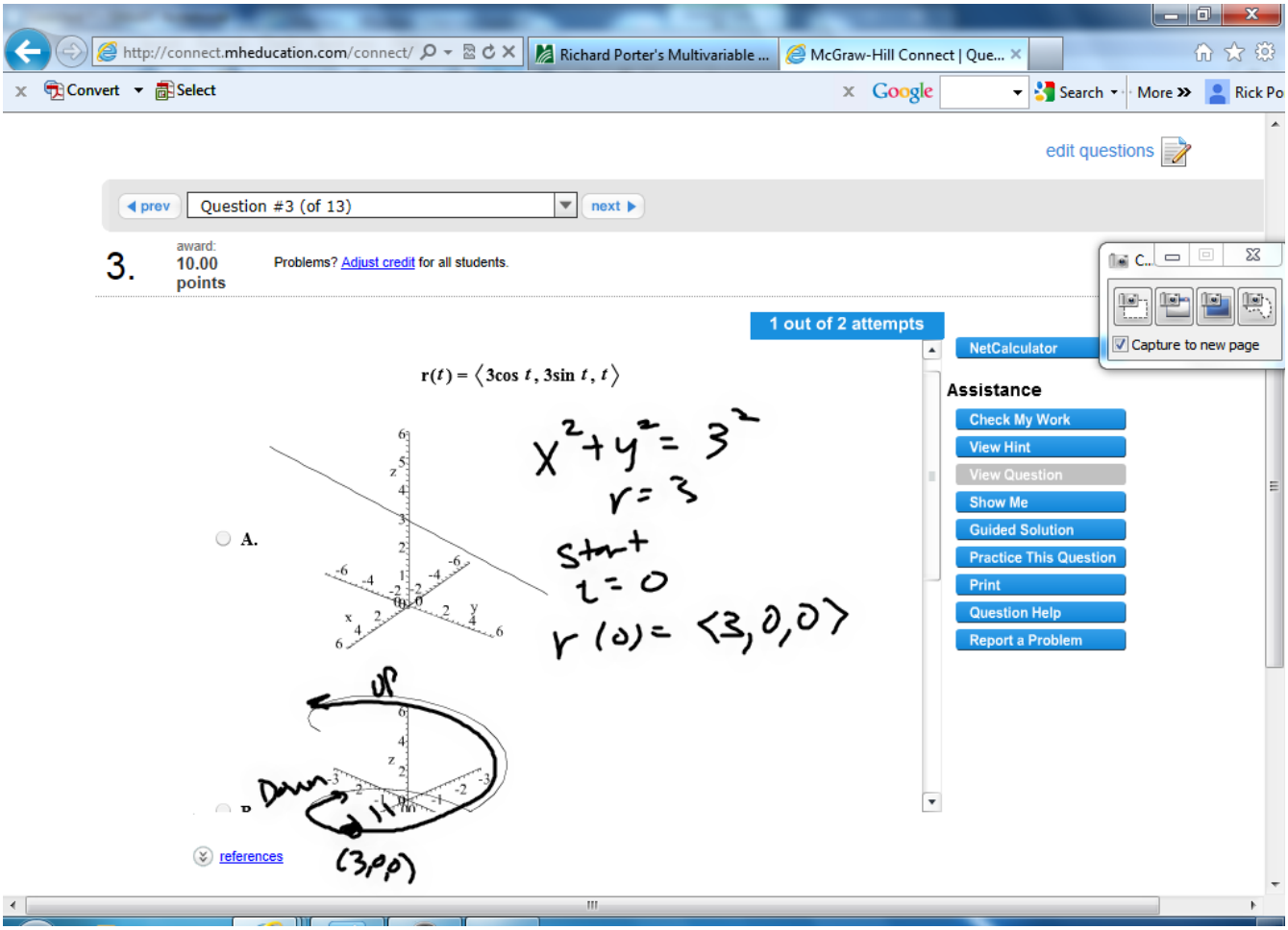
1.
award:
10.00
points
Problems? Adjust credit for all students.
Match the vector–valued function
$f(t) = \langle t \cos t, t \sin t, t \rangle$
with the corresponding computer–generated graph.
C.
D.
Assistance
Check My Work
View Hint
View Question
Show Me
Guided Solution
Practice This Question
Print
Question Help
Report a Problem
References
X y z
$x^2 = t^2 \cos^2 t$
$y^2 = t^2 \sin^2 t$
$x^2 + y^2 = t^2 (\sin^2 + \cos^2)$
$x^2 + y^2 = z^2$
x = cost
y = sint
z = t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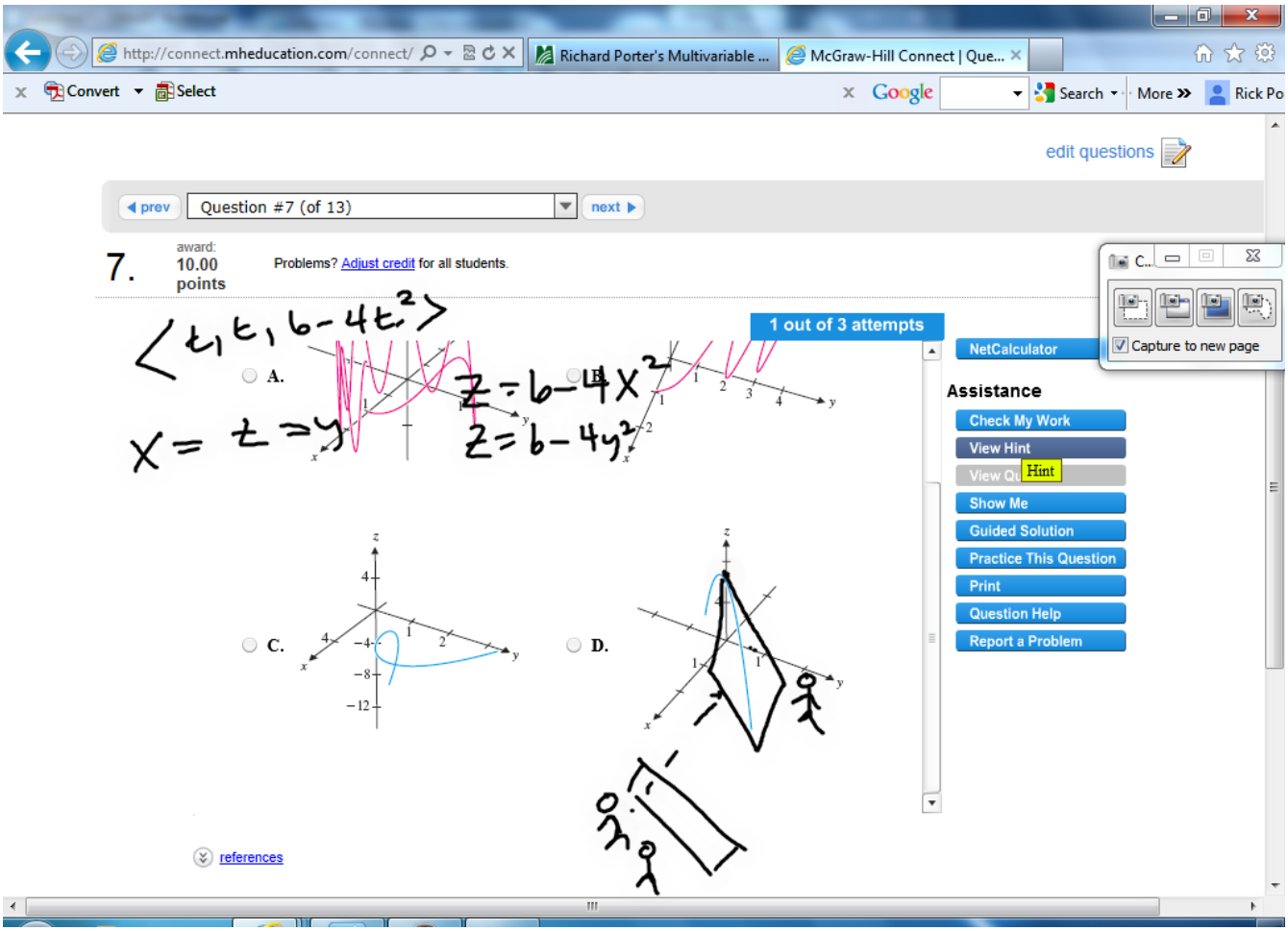
Question #3 (of 13)
next
award:
10.00
points
3.
Problems? Adjust credit for all students.
1 out of 2 attempts
NetCalculator
Capture to new page
$\mathbf{r}(t) = \langle 3\cos t, 3\sin t, t \rangle$
A.
$x^2 + y^2 = 3^2$
$r = 3$
start
$t = 0$
$r(0) = \langle 3, 0, 0 \rangle$
up
Down
(3,0,0)
Assistance
Check My Work
View Hint
View Question
Show Me
Guided Solution
Practice This Question
Print
Question Help
Report a Problem
references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Question #7 (of 13)
next
7.
award:
10.00
points
Problems? Adjust credit for all students.
1 out of 3 attempts
NetCalculator
Assistance
Check My Work
View Hint
Hint
Show Me
Guided Solution
Practice This Question
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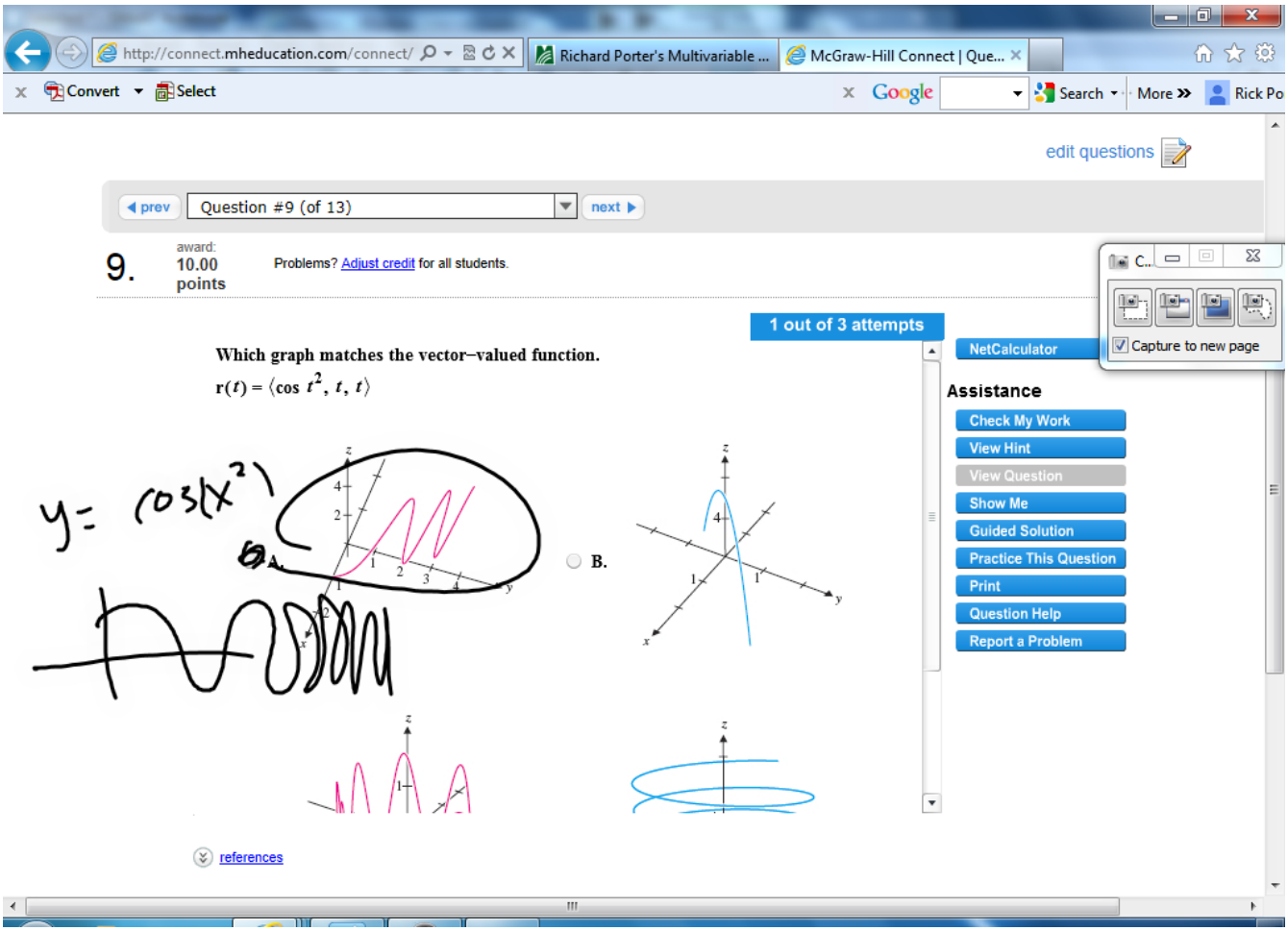
Question Help
Report a Problem
Capture to new page
A.
B.
C.
D.
references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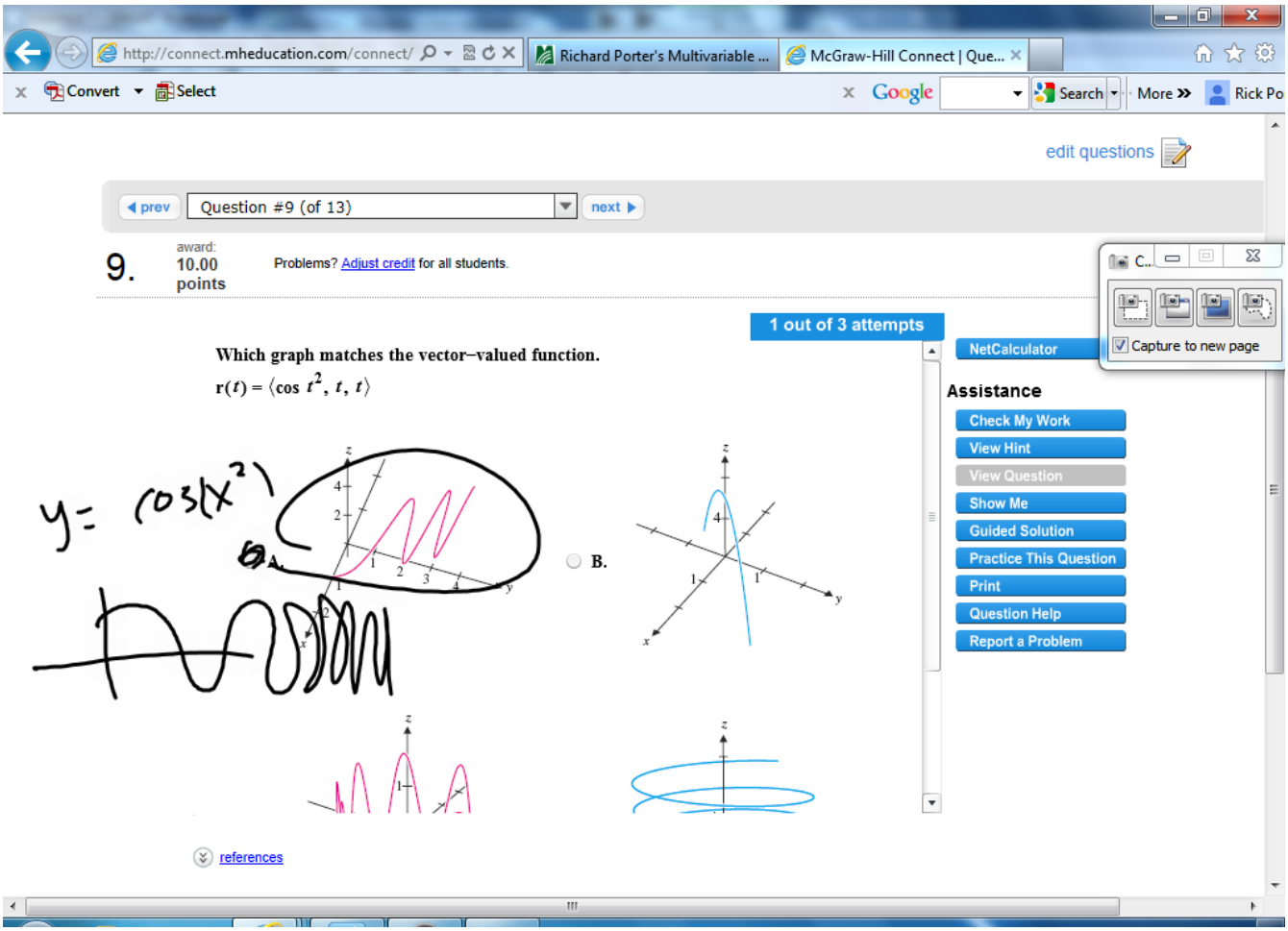
Question #9 (of 13)
next
9.
award:
10.00
points
Problems? Adjust credit for all students.
1 out of 3 attempts
Which graph matches the vector–valued function.
r(t) = ⟨cos t², t, t⟩
y= cos(x²)
A.
B.
NetCalculator
Assistance
Check My Work
View Hint
View Question
Show Me
Guided Solution
Practice This Question
Print
Question Help
Report a Problem
Capture to new page
references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edit questions
prev
Question #9 (of 13)
next
9.
award:
10.00
points
Problems? Adjust credit for all students.
1 out of 3 attempts
Which graph matches the vector–valued function.
r(t) = ⟨cos t², t, t⟩
y= cos(x²)
A.
B.
NetCalculator
Assistance
Check My Work
View Hint
View Question
Show Me
Guided Solution
Practice This Question
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Question Help
Report a Problem
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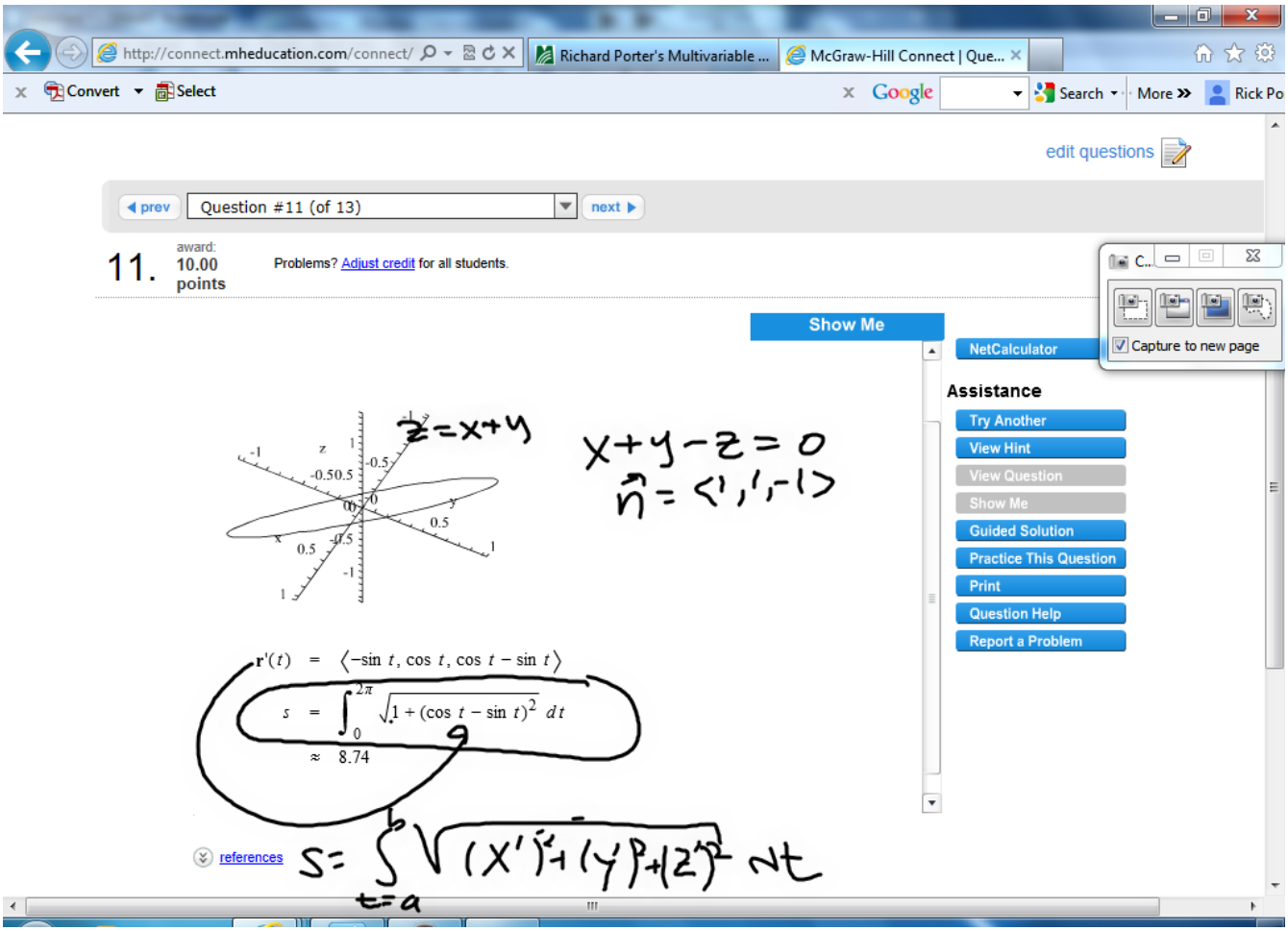
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Search
More
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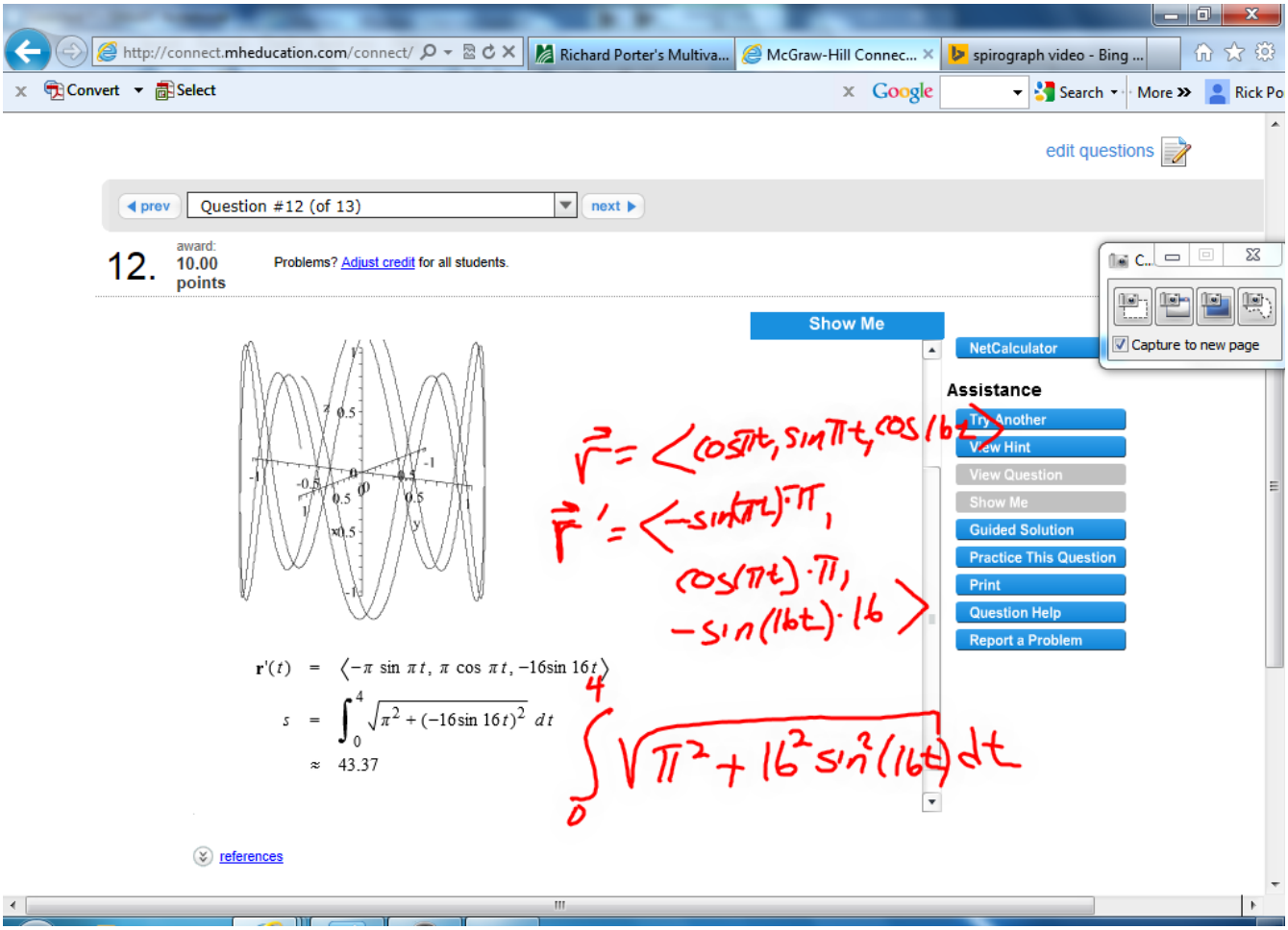
edit questions
prev
Question #11 (of 13)
next
11.
award:
10.00
points
Problems? Adjust credit for all students.
Show Me
NetCalculator
Capture to new page
Assistance
Try Another
View Hint
View Question
Show Me
Guided Solution
Practice This Question
Print
Question Help
Report a Problem
z=x+y
x+y−z=0
n⃗ = ⟨1,1,−1⟩
r'(t) = ⟨−sin t, cos t, cos t − sin t⟩
s = ∫ from 0 to 2π √(1 + (cos t − sin t)²) dt
≈ 8.74
references
S= ∫ from t=a to b √((x')²+(y')²+(z')²) dt


edit questions
prev
Question #12 (of 13)
next
12.
award:
10.00
points
Problems? Adjust credit for all students.
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View Hint
View Question
Show Me
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Print
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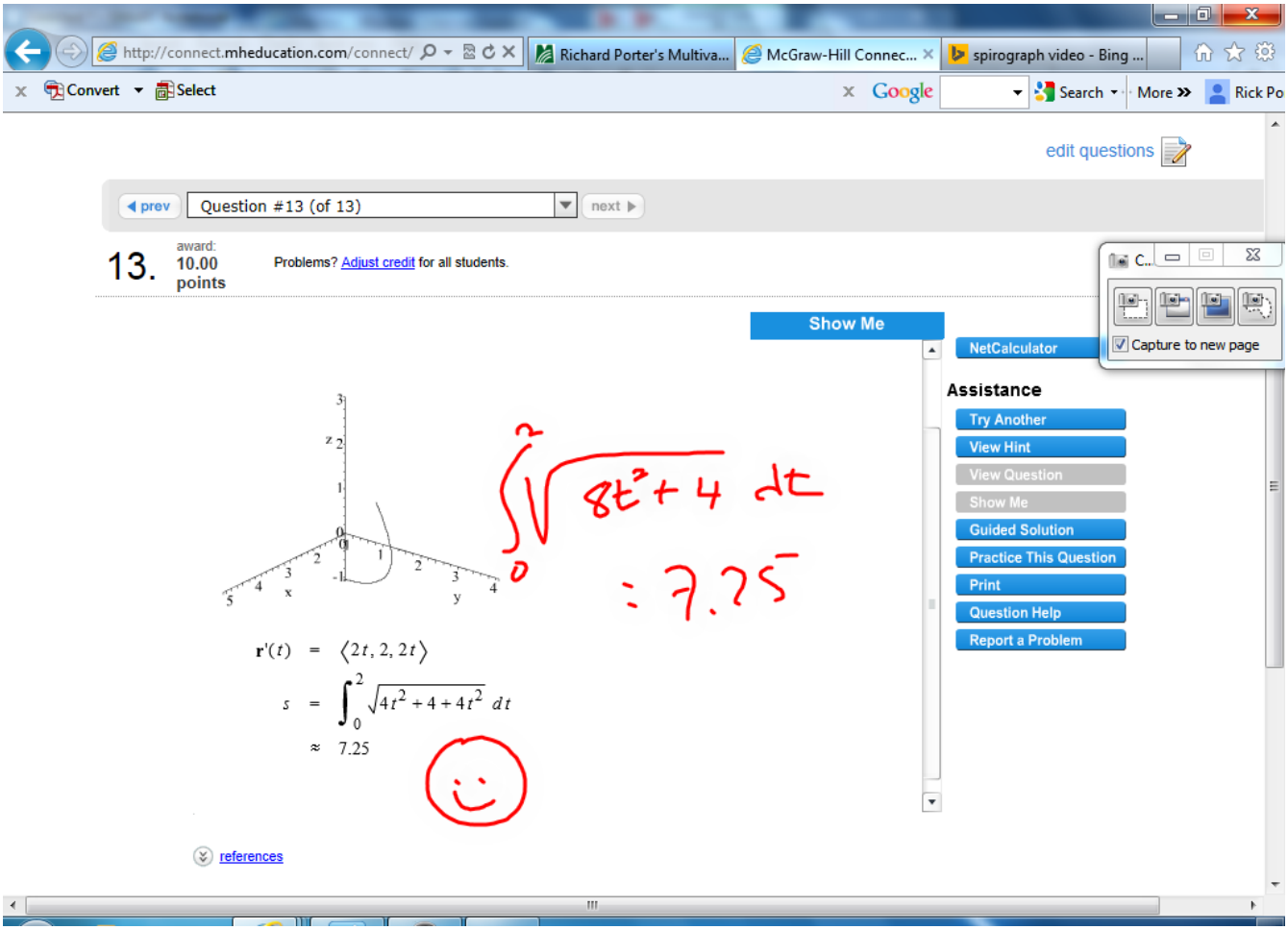
$\mathbf{r}'(t) = \langle -\pi \sin \pi t, \pi \cos \pi t, -16\sin 16t \rangle$
$s = \int_0^4 \sqrt{\pi^2 + (-16\sin 16t)^2}\, dt$
≈ 43.37
$\vec{r} = \langle \cos \pi t, \sin \pi t, \cos 16t \rangle$
$\vec{r}\,' = \langle -\sin(\pi t)\cdot\pi, \cos(\pi t)\cdot\pi, -\sin(16t)\cdot 16 \rangle$
$\int_0^4 \sqrt{\pi^2 + 16^2 \sin^2(16t)}\, dt$
references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Question #13 (of 13)
next
13.
award:
10.00
points
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View Question
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Guided Solution
Practice This Question
Print
Question Help
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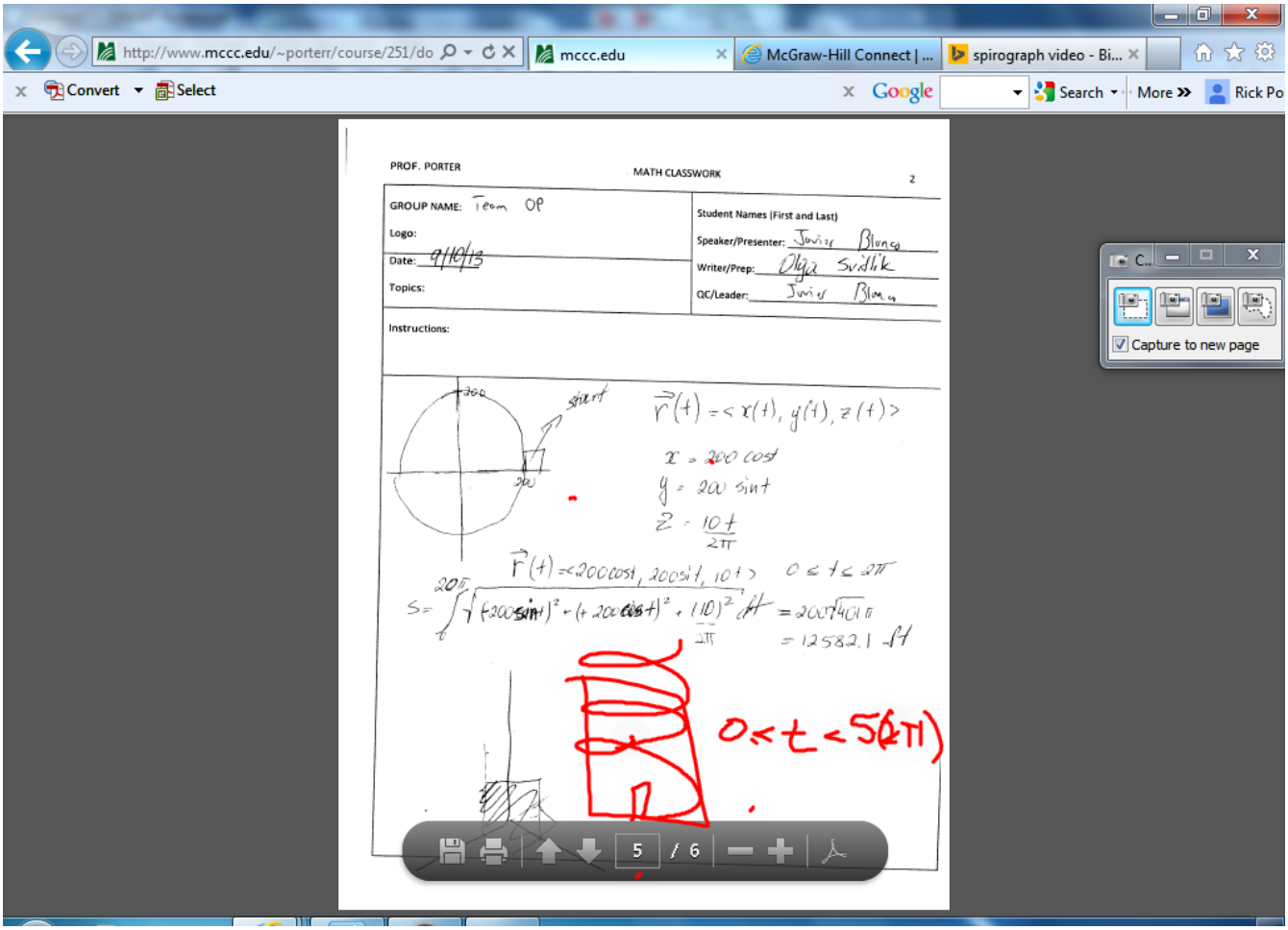
$\int_0^2 \sqrt{8t^2+4}\,dt$
≈ 7.25
$\mathbf{r}'(t) = \langle 2t, 2, 2t \rangle$
$s = \int_0^2 \sqrt{4t^2+4+4t^2}\,dt$
≈ 7.25
references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PROF. PORTER
MATH CLASSWORK
2
GROUP NAME: Team OP
Logo:
Date: 9/10/13
Topics:
Student Names (First and Last)
Speaker/Presenter: Javier Blanco
Writer/Prep: Olga Svidlik
QC/Leader: Javier Blanco
Instructions:
start
200
200
$\vec{r}(t) = \langle x(t), y(t), z(t) \rangle$
$x = 200\cos t$
$y = 200\sin t$
$z = \frac{10t}{2\pi}$
$\vec{r}(t) = \langle 200\cos t, 200\sin t, \frac{10t}{2\pi} \rangle \quad 0 \le t \le 2\pi$
$S = \int_0^{2\pi} \sqrt{(-200\sin t)^2 + (200\cos t)^2 + (\frac{10}{2\pi})^2}\, dt = 200\sqrt{401}\,\pi$
$= 12582.1$ ft
$0 < t < 5(2\pi)$
5 / 6
Capture to new page