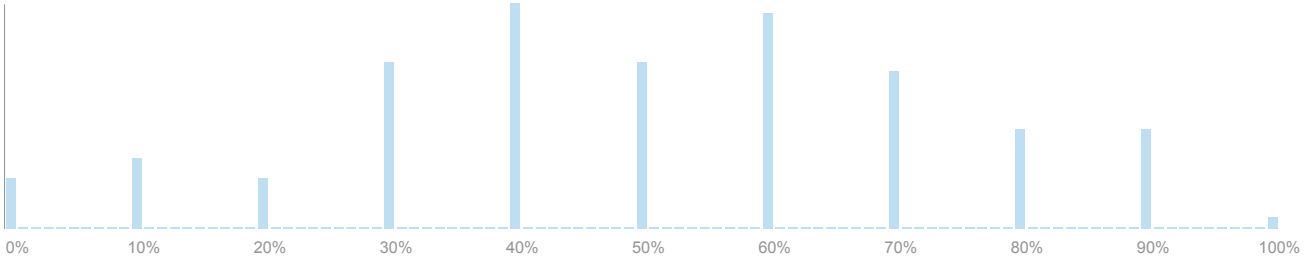
Quiz Summary

Section Filter ▾ | Student Analysis | Item Analysis

Average Score	High Score	Low Score	Standard Deviation	Average Time
50%	100%	0%	2.35	08:11



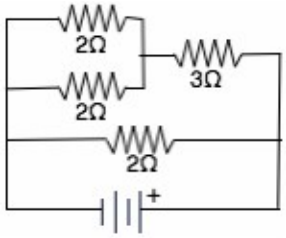
Question Breakdown

Attempts: 131 out of 133

+0.38

Discrimination Index

What is the total resistance of the circuit below?



1/3 ohm	5 respondents	4 %
4/3 ohm	107 respondents	**80 %** ✓
2 ohm	5 respondents	4 %
6 ohm	13 respondents	10 %

I don't know	1 respondents	1 %
No Answer	2 respondents	2 %

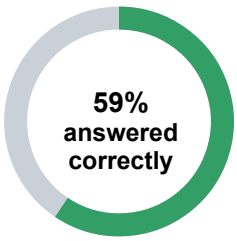
Attempts: 130 out of 133

A really strong French chef throws a 1 meter long baguette at you for insulting his croissants. You dodge the loaf, which is quite a feat because it is moving at four-fifths the speed of light. How long does the loaf look to you as it whizzes by your head?

+0.54

Discrimination Index

1/5 m	20 respondents	15 %
3/5 m	79 respondents	**59 %** ✓
1 m	4 respondents	3 %
5/4 m	23 respondents	17 %
I don't know.	4 respondents	3 %
No Answer	3 respondents	2 %



Attempts: 130 out of 133

For an electromagnetic wave moving through vacuum, what is the ratio of the magnitude of the electric field to the magnetic field equal to?

a) ϵ_0

b) $4\pi\epsilon_0$

c) c

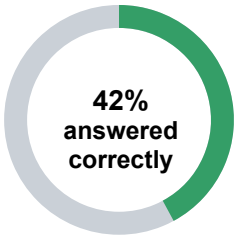
d) c^2

e) I don't know.

+0.54

Discrimination Index

a)	24 respondents	18 %
b)	40 respondents	30 %
c)	56 respondents	**42 %** ✓
d)	6 respondents	5 %
e)	4 respondents	3 %
No Answer	3 respondents	2 %



Attempts: 130 out of 133

In which direction does the proton initially deflect as it passes into the magnetic field in the diagram below? The magnetic field is directed into the page.

+0.60

Discrimination Index

up	71 respondents	**53 %** ✓
down	17 respondents	13 %
into the page.	20 respondents	15 %
out of the page.	17 respondents	13 %
I don't know.	5 respondents	4 %
No Answer	3 respondents	2 %

Attempts: 130 out of 133

+0.46

Discrimination Index

Which of the following can be completely be explained without quantum physics?

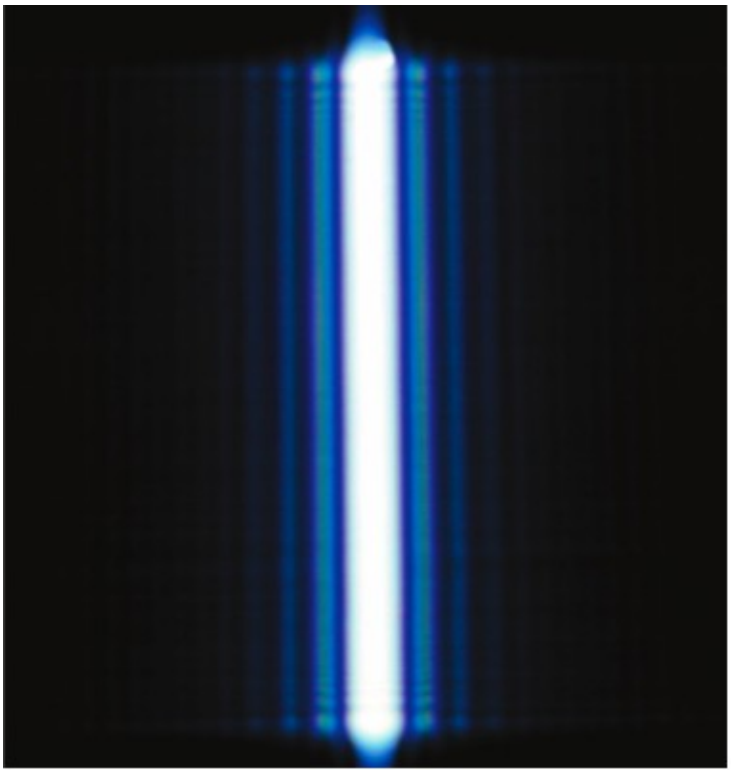
The Balmer series.	13 respondents	10 %
The work function of the photoelectric effect.	19 respondents	14 %
The interfenece patterns of light.	75 respondents	**56 %** ✓
The interfenece patterns of electrons.	12 respondents	9 %
I don't know.	11 respondents	8 %
No Answer	3 respondents	2 %

Attempts: 130 out of 133

+0.34

Discrimination Index

This image was most likely created by passing one wavelength of light through



a single aperture.	8 respondents	6 %
a single slit.	50 respondents	**38 %** ✓
a double slit.	49 respondents	37 %
a diffraction grating.	21 respondents	16 %
I don't know.	2 respondents	2 %
No Answer	3 respondents	2 %

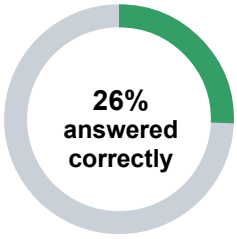
Attempts: 130 out of 133

A stream of protons, electrons and oxygen atoms pass at the same speed through a 1 micrometer-wide slit. Which stream will produce the widest diffraction pattern on a detector behind the slit?

+0.38

Discrimination Index

The protons.	8 respondents	6 %
The electrons.	34 respondents	**26 %** ✓
The oxygen atoms.	36 respondents	27 %
All three will be the same.	21 respondents	16 %
None of them will produce a diffraction pattern.	13 respondents	10 %
I don't know.	18 respondents	14 %
No Answer	3 respondents	2 %



Attempts: 130 out of 133

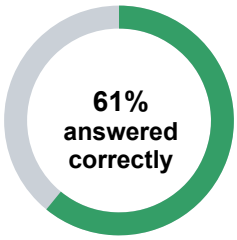
This image shows a point (the dot) among two equal positive charges and a negative charge. At the dot, the electric field points

+0.50

Discrimination Index

left	81 respondents	**61 %** ✓
right	24 respondents	18 %

up	5 respondents	4 %
down	3 respondents	2 %
nowhere. The electric field is zero.	10 respondents	8 %
I don't know.	7 respondents	5 %
No Answer	3 respondents	2 %



Attempts: 126 out of 133

The image shows a blob shaped closed surface, with total area A, and has several charges scattered randomly throughout the volume it encloses. In total there are 6 free electrons and 17 free protons within the blob. If q represents the fundamental charge of a proton and ϵ_0 is the permittivity of free space, then what is the electric flux through the surface?

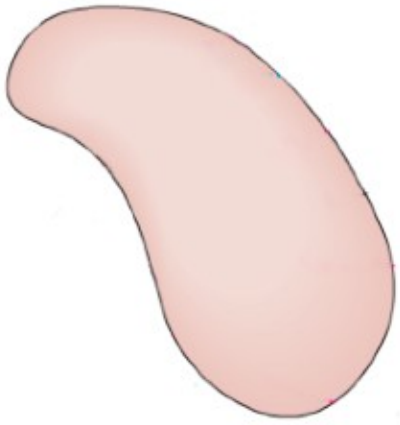
a) $23\frac{q^2}{A}$

b) $11\frac{q}{\epsilon_0}$

c) $-6qA$

d) $\epsilon_0 A$

e) I don't know

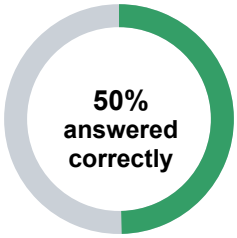


+0.56

Discrimination Index

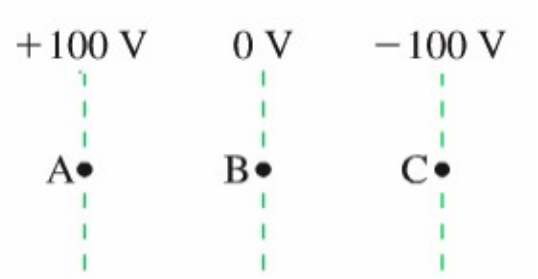
a)	16 respondents	12 %
b)	66 respondents	**50 %** ✓
c)	8 respondents	6 %

d)	21 respondents	16 %
e)	15 respondents	11 %
No Answer	7 respondents	5 %



Attempts: 125 out of 133

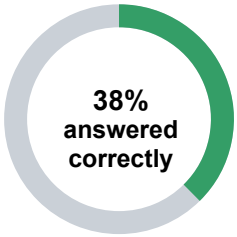
An electron is released from rest at point B, where the electric potential is 0V. Afterward, the electron will



+0.44

Discrimination Index

remain at rest at B.	28 respondents	21 %
move toward A at constant speed.	16 respondents	12 %
move toward A at an increasing speed.	50 respondents	**38 %** ✓
move toward C at constant speed.	11 respondents	8 %
move toward C at an increasing speed.	15 respondents	11 %
I don't know.	5 respondents	4 %
No Answer	8 respondents	6 %


38%
answered
correctly