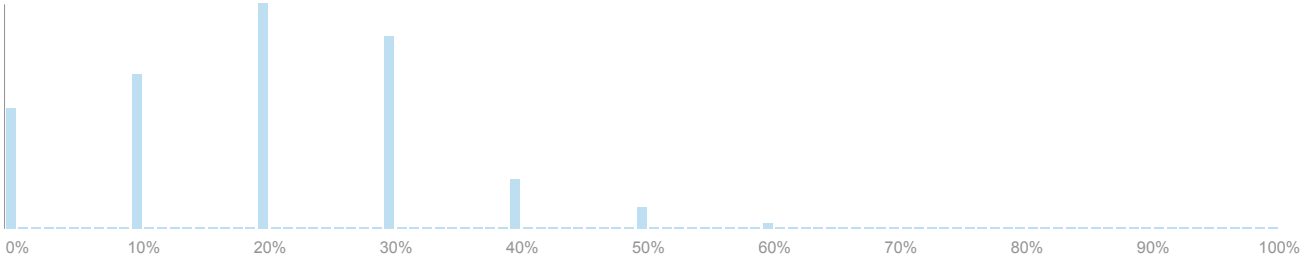
Quiz Summary

Section Filter ▾ | Student Analysis | Item Analysis

Average Score	High Score	Low Score	Standard Deviation	Average Time
20%	60%	0%	1.29	06:07



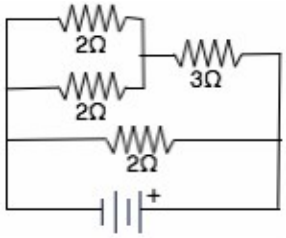
Question Breakdown

Attempts: 154 out of 159

+0.35

Discrimination Index

What is the total resistance of the circuit below?



1/3 ohm	3 respondents	2 %	
4/3 ohm	26 respondents	**16 %**	✓
2 ohm	29 respondents	18 %	
6 ohm	14 respondents	9 %	

I don't know	82 respondents	52 %
No Answer	5 respondents	3 %

Attempts: 154 out of 159

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?

+0.30

Discrimination Index

1/5 m	34 respondents	21 %	
3/5 m	14 respondents	**9 %**	✓
1 m	16 respondents	10 %	
5/4 m	43 respondents	27 %	
I don't know	47 respondents	30 %	
No Answer	5 respondents	3 %	

Attempts: 154 out of 159

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

a) ϵ_0

b) $4\pi\epsilon_0$

c) c

d) c^2

e) I don't know.

+0.07

Discrimination Index

a)	18 respondents	11 %	
b)	27 respondents	17 %	
c)	3 respondents	**2 %**	✓
d)	9 respondents	6 %	
e)	97 respondents	61 %	
No Answer	5 respondents	3 %	

Attempts: 154 out of 159

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.

+0.10

Discrimination Index

up	9 respondents	**6 %**	✓
down	8 respondents	5 %	
into the page	45 respondents	28 %	
out of the page	53 respondents	33 %	
I don't know	39 respondents	25 %	
No Answer	5 respondents	3 %	

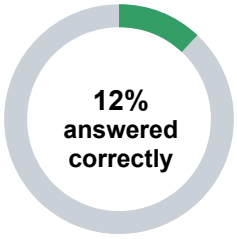
Attempts: 153 out of 159

+0.32

Discrimination Index

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

The Balmer series	25 respondents	16 %	
The work function of the photoelectric effect.	18 respondents	11 %	
The interference pattern of light.	19 respondents	**12 %**	✓
The interference pattern of electrons.	16 respondents	10 %	
I don't know.	75 respondents	47 %	
No Answer	6 respondents	4 %	

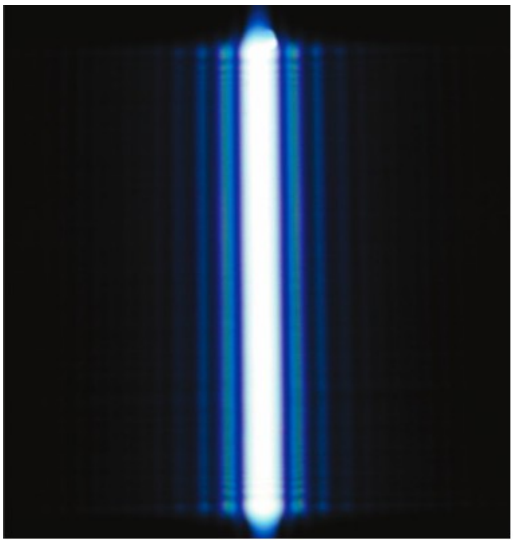


Attempts: 154 out of 159

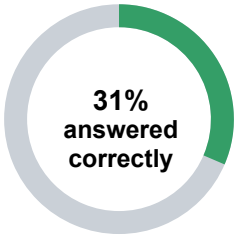
+0.40

Discrimination Index

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



a circular aperture.	16 respondents	10 %
a single slit.	50 respondents	**31 %**
a double slit.	30 respondents	19 %
a diffraction grating.	35 respondents	22 %
I don't know.	23 respondents	14 %
No Answer	5 respondents	3 %



Attempts: 153 out of 159

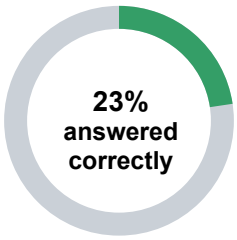
A stream of protons, electrons and oxygen atoms pass at the same speed through a 1 micrometer-wide slit. Which stream will produce the widest diffraction pattern on a detector behind the slit?

+0.38

Discrimination Index

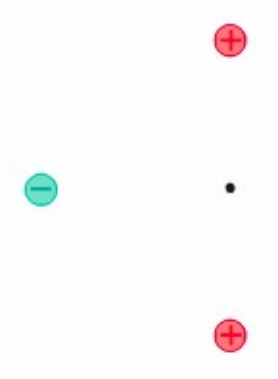
The protons.	8 respondents	5 %

The electrons.	36 respondents	**23 %**	✓
The oxygen atoms.	40 respondents	25 %	
All three will be the same.	11 respondents	7 %	
None of them will produce a diffraction pattern.	10 respondents	6 %	
I don't know.	48 respondents	30 %	
No Answer	6 respondents	4 %	



Attempts: 154 out of 159

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

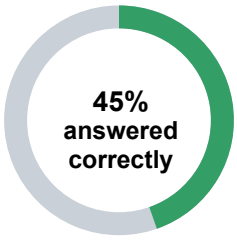


+0.52

Discrimination Index

left	71 respondents	**45 %**	✓
right	45 respondents	28 %	
up	3 respondents	2 %	
down		0 %	
nowhere. The electric field is zero.	16 respondents	10 %	

I don't know.	19 respondents	12 %
No Answer	5 respondents	3 %



Attempts: 153 out of 159

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?

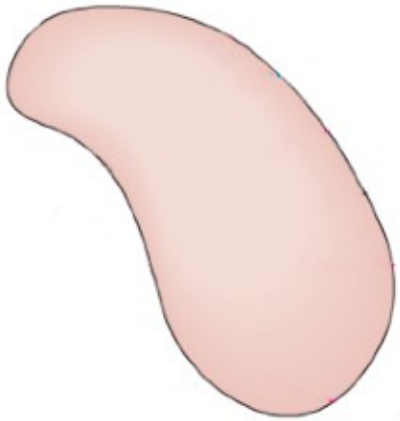
a) $23\frac{q^2}{A}$

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

c) $-6qA$

d) $\epsilon_0 A$

e) I don't know



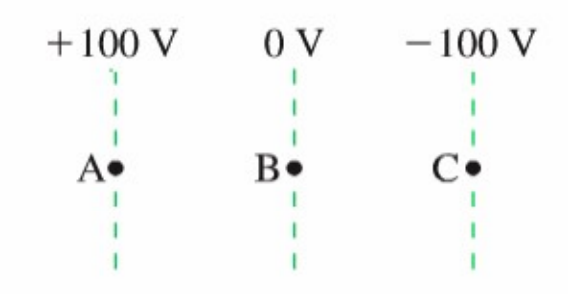
+0.32

Discrimination Index

a)	10 respondents	6 %	
b)	24 respondents	**15 %**	✓
c)	6 respondents	4 %	
d)	9 respondents	6 %	
e)	104 respondents	65 %	
No Answer	6 respondents	4 %	

Attempts: 152 out of 159

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



+0.37

Discrimination Index

remain at rest at B.	34 respondents	21 %
move toward A at constant speed.	14 respondents	9 %
move toward A at an increasing speed. ✓	60 respondents	**38 %**
move toward C at constant speed.	4 respondents	3 %
move toward C at an increasing speed.	15 respondents	9 %
I don't know.	25 respondents	16 %
No Answer	7 respondents	4 %