Quiz Summary

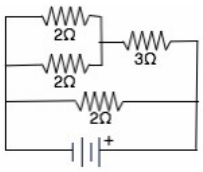
Section Filter | Student Analysis | Item Analysis

Average Score	High Score	Low Score	Standard Deviation	Average Time
24%	60%	0%	1.52	05:39

Question Breakdown

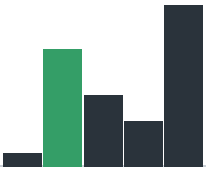
Attempts: 159 out of 159

What is the total resistance of the circuit below?



29% **Correct answer**

29% of your students correctly answered this question.



+0.52 **Discrimination Index**

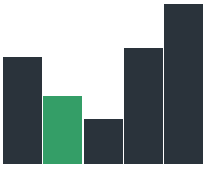
2%	1/3 ohm 3 respondents	29%	4/3 ohm 46 respondents
17%	2 ohm 27 respondents	10%	6 ohm 16 respondents
42%	I don't know 67 respondents		

Attempts: 159 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?

13% **Correct answer**

13% of your students correctly answered this question.



+0.32 **Discrimination Index**

21% 1/5 m
34 respondents

13% 3/5 m
21 respondents

8% 1 m
13 respondents

23% 5/4 m
37 respondents

34% I don't know
54 respondents

Attempts: 159 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

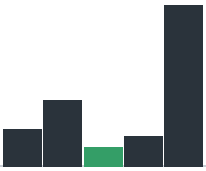
d) c^2

e) I don't know.

4%

Correct answer

4% of your students correctly answered this question.



+0.21 Discrimination Index

11% a)
17 respondents

21% b)
33 respondents

4% c)
7 respondents

8% d)
13 respondents

56% e)
89 respondents

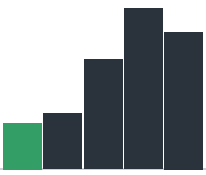
Attempts: 159 out of 159

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.

8%

Correct answer

8% of your students correctly answered this question.



+0.21 Discrimination Index

8% up
13 respondents

10% down
16 respondents

% into the page
34 respondents
21

% out of the page
53 respondents
33

27% I don't know
43 respondents

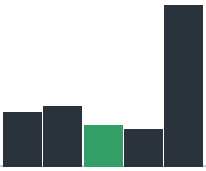
Attempts: 159 out of 159

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

11%

Correct answer

11% of your students correctly answered this question.



+0.26 Discrimination Index

14% The Balmer series
23 respondents

16% The work function of the photoelectric effect.
26 respondents

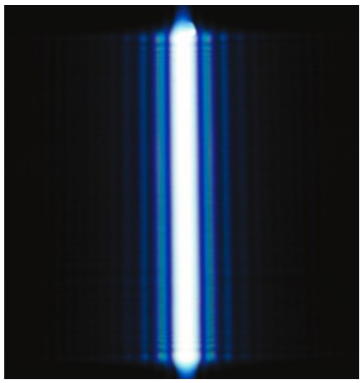
11% The interference pattern of light.
17 respondents

9% The interference pattern of electrons.
15 respondents

49% I don't know.
78 respondents

Attempts: 159 out of 159

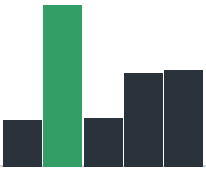
This image was most likely created by passing one wavelength of light through



38%

Correct answer

38% of your students correctly answered this question.



+0.43 Discrimination Index

9% a circular aperture.
15 respondents

38% a single slit.
61 respondents

10% a double slit.
16 respondents

21% a diffraction grating.
33 respondents

21% I don't know.
34 respondents

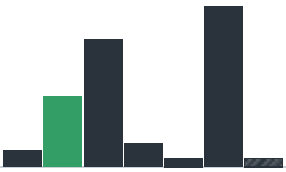
Attempts: 158 out of 159

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?

17%

Correct answer

17% of your students correctly answered this question.



+0.37 Discrimination Index

- 3% The protons. 4 respondents
- 17% The electrons. 27 respondents
- 32% The oxygen atoms. 51 respondents
- 4% All three will be the same. 7 respondents
- 1% None of them will produce a diffraction pattern. 1 respondents
- 43% I don't know. 68 respondents
- 1% No Answer 1 respondents

Attempts: 158 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

55%

Correct answer

55% of your students correctly answered this question.

+0.50 Discrimination Index

- 55% left 88 respondents
- 26% right 42 respondents
- 2% up 3 respondents
- 2% down 3 respondents
- 6% nowhere. The electric field is zero. 10 respondents
- 8% I don't know. 12 respondents
- 1% No Answer 1 respondents

Attempts: 158 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?

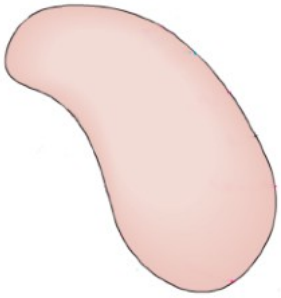
a) $23\frac{q^2}{A}$

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

c) $-6qA$

d) $\epsilon_0 A$

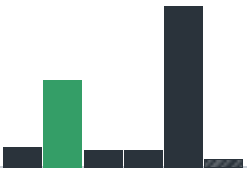
e) I don't know



29%

Correct answer

29% of your students correctly answered this question.



+0.46 Discrimination Index

5% a)
8 respondents

29% b)
46 respondents

4% c)
6 respondents

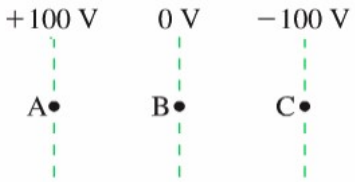
4% d)
6 respondents

58% e)
92 respondents

1% No Answer
1 respondents

Attempts: 158 out of 159

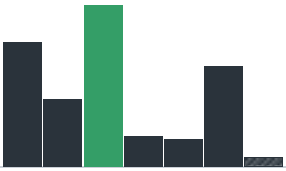
An electron is released from rest at point B, where the electric potential is 0V. Afterward, the electron will



33%

Correct answer

33% of your students correctly answered this question.



+0.40 Discrimination Index

25% remain at rest at B.
39 respondents

13% move toward A at constant speed.
20 respondents

33% move toward A at an increasing speed.
53 respondents

5% move toward C at constant speed.
8 respondents

4% move toward C at an increasing speed.
7 respondents

19% I don't know.
31 respondents

1% No Answer
1 respondents