



CLASS

(Colorado Learning Attitudes about Science Survey)

Name: _____

Last 6 digits of your Student ID #: _____

Introduction

Here are a number of statements that may or may not describe your beliefs about learning physics. You are asked to rate each statement by circling a number between 1 and 5 where the numbers mean the following:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Choose one of the above five choices that best expresses your feeling about the statement. If you don't understand a statement, leave it blank. If you understand, but have no strong opinion, choose 3.

Survey

1. A significant problem in learning physics is being able to memorize all the information I need to know.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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2. When I am solving a physics problem, I try to decide what would be a reasonable value for the answer.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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3. I think about the physics I experience in everyday life.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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4. It is useful for me to do lots and lots of problems when learning physics.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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5. After I study a topic in physics and feel that I understand it, I have difficulty solving problems on the same topic.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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6. Knowledge in physics consists of many disconnected topics.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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7. As physicists learn more, most physics ideas we use today are likely to be proven wrong.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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8. When I solve a physics problem, I locate an equation that uses the variables given in the problem and plug in the values.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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9. I find that reading the text in detail is a good way for me to learn physics.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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10. There is usually only one correct approach to solving a physics problem.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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11. I am not satisfied until I understand why something works the way it does.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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12. I cannot learn physics if the teacher does not explain things well in class.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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13. I do not expect physics equations to help my understanding of the ideas; they are just for doing calculations.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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14. I study physics to learn knowledge that will be useful in my life outside of school.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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15. If I get stuck on a physics problem my first try, I usually try to figure out a different way that works.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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16. Nearly everyone is capable of understanding physics if they work at it.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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17. Understanding physics basically means being able to recall something you've read or been shown.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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18. There could be two different correct values to a physics problem if I use two different approaches.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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19. To understand physics I discuss it with friends and other students.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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20. I do not spend more than five minutes stuck on a physics problem before giving up or seeking help from someone else.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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21. If I don't remember a particular equation needed to solve a problem on an exam, there's nothing much I can do (legally!) to come up with it.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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22. If I want to apply a method used for solving one physics problem to another problem, the problems must involve very similar situations.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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23. In doing a physics problem, if my calculation gives a result very different from what I'd expect, I'd trust the calculation rather than going back through the problem.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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24. In physics, it is important for me to make sense out of formulas before I can use them correctly.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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25. I enjoy solving physics problems.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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26. In physics, mathematical formulas express meaningful relationships among measurable quantities.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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27. It is important for the government to approve new scientific ideas before they can be widely accepted.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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28. Learning physics changes my ideas about how the world works.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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29. To learn physics, I only need to memorize solutions to sample problems.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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30. Reasoning skills used to understand physics can be helpful to me in my everyday life.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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31. We use this statement to discard the survey of people who are not reading the questions. Please select agree-option 4 (not strongly agree) for this question to preserve your answers.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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32. Spending a lot of time understanding where formulas come from is a waste of time.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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33. I find carefully analyzing only a few problems in detail is a good way for me to learn physics.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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34. I can usually figure out a way to solve physics problems.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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35. The subject of physics has little relation to what I experience in the real world.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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36. There are times I solve a physics problem more than one way to help my understanding.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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37. To understand physics, I sometimes think about my personal experiences and relate them to the topic being analyzed.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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38. It is possible to explain physics ideas without mathematical formulas.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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39. When I solve a physics problem, I explicitly think about which physics ideas apply to the problem.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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40. If I get stuck on a physics problem, there is no chance I'll figure it out on my own.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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41. It is possible for physicists to carefully perform the same experiment and get two very different results that are both correct.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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42. When studying physics, I relate the important information to what I already know rather than just memorizing it the way it is presented.

Strongly Disagree	1	2	3	4	5	Strongly Agree
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