



Educators Answer Key

Instructions: For multiple choice questions, unless a question says, "Multiple answers allowed but not required", select the **BEST** of the available answers.

Name* _____

Email* _____

1. What are values?
 - a. Wants
 - b. Needs
 - c. Likes
 - d. Dislikes
 - e. The thing we care about
 - f. All of the above
2. What is an alternative? ***Multiple answers allowed but not required
 - a. A choice
 - b. One of multiple courses of action
 - c. An option
 - d. An engine part
 - e. A selection
 - f. All of the above
3. How can I know if I'm making a good quality decision?
 - a. I've worked through the decision process
 - b. I'm well rested, not emotional or stressed and have slept on it.
 - c. I've applied critical thinking to the decision
 - d. I've put all of the information in a weight and rate table
 - e. I've gotten expert advice from someone who made a similar decision
 - f. I've considered risks and rewards
 - g. All of the above
4. What are the steps in the decision chain?
 - a. Observe, orient, decide, act
 - b. Plan, do, check, act
 - c. Frame, values, alternatives, information, reasoning, commitment
 - d. Plan, do, observe, orient, check, repeat
 - e. Commit, measure, track, monitor, trigger
5. Understanding probabilities is extremely important for some decisions. There are 2 basic types of probability, independent probabilities and dependent probabilities. Which answer best describes **dependent** probabilities? ***Multiple answers allowed but not required



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- a. If thing "A" happens, then it's more likely thing "B" will happen
 - b. If thing "A" happens, then it's less likely thing "B" will happen
 - c. If thing "A" happens, it's equally likely that thing "B" will happen
 - d. If thing "B" happens, it's more likely thing "A" happened
 - e. None of the above
 - f. All of the above except e.
6. Understanding probabilities is extremely important for some decisions. There are 2 basic types of probability, independent probabilities and dependent probabilities. Which answer best describes **independent** probabilities? ***Multiple answers allowed but not required
- a. If thing "A" happens, then it's more likely thing "B" will happen
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 - d. If thing "B" happens, it's more likely thing "A" happened
 - e. None of the above
 - f. All of the above except e.
7. When "A" happens, then the odds of seeing "B" change. This is called:
- a. A dependent probability
 - b. An independent probability
 - c. A long shot
 - d. Confidence rating
8. A decision tree helps to compare the odds of different options. To calculate the odds of a dependent probability, what math operation must you do?
- a. Addition
 - b. Subtraction
 - c. Multiplication
 - d. Division
 - e. Exponentiation
9. All of the probabilities of the different options must add up to 100%.
- a. True
 - b. False
10. When you feel 100% certain about a decision:
- a. Go with it.
 - b. Be extra careful because you might have a math error
 - c. Be extra careful because you may be wrong
 - d. Check your assumptions to make sure they are correct.



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11. Does the lizard brain do complex probability calculations?

- a. Yes
- b. No

12. "Think twice about your information." means to think about:

- a. How reliable is the information you have?
- b. Do you have enough information to make an informed decision?
- c. How hard would it be to get the information I'd like to have?
- d. Is it worth more time or effort to get more information?
- e. Would the decision change if I had other information?
- f. All of the above

13. *** Extra credit*** How many advantages can you name for understanding probability?

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____



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Answers are given in **bold**.

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 - a. **A choice**
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 - d. **If thing "B" happens, it's more likely thing "A" happened**
 - e. None of the above



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 - c. **Be extra careful because you may be wrong**
 - d. **Check your assumptions to make sure they are correct.**
11. Does the "lizard brain" part of our mind do complex probability calculations?
 - a. Yes
 - b. **No**



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12. "Think twice about your information." means to think about: ***Multiple answers allowed but not required

- a. **How reliable is the information you have?**
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- d. **Is it worth more time or effort to get more information?**
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- f. **All of the above**

13. *** Extra credit*** How many advantages can you name for understanding probability?
Some examples given but your students may come up with more. Ideas for a group discussion

- a. ___More confidence in your choice
- b. ___Better at dealing with uncertainty
- c. ___Won't miss some opportunities
- d. ___Easy to explain why I made this choice
- e. _____
- f. _____
