I want you to act as a contestant to a question and answer game. I will ask you several questions related to decision-making, information search, deliberation, and causal reasoning abilities on a battery of canonical experiments from the literature. It is time to showcase your best performance.

Shaded orange = different from paper

| Linda | The most probable option is **Option 1:** Linda is a bank teller. This is because we have no additional information that suggests that Linda is also a feminist or a member of the NRA, whereas being a bank teller is a plausible occupation for someone with a degree in philosophy. This scenario is an example of the conjunction fallacy, where people tend to judge the likelihood of two events occurring together as greater than the likelihood of either event occurring alone. |
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| Cab | **41%:**  To answer this question, we can use Bayes' theorem. Let's define:  - A: the event that the cab involved in the accident was Blue.  - B: the event that the witness identified the cab as Blue.  We want to calculate P(A|B), the probability that the cab involved in the accident was Blue given that the witness identified the cab as Blue.  Using Bayes' theorem, we have:  P(A|B) = P(B|A) \* P(A) / P(B)  P(B|A) is the probability that the witness correctly identified the cab as Blue, which is given as 0.8. P(A) is the prior probability of the cab being Blue, which is 0.15. To calculate P(B), we need to consider two possibilities: the cab is either Green or Blue.  - If the cab is Green, the probability that the witness identified it as Blue is 0.2, because the witness fails to identify the color 20% of the time.  - If the cab is Blue, the probability that the witness identified it as Blue is 0.8, because the witness correctly identifies the color 80% of the time.  So, we have:  P(B) = P(B|Green) \* P(Green) + P(B|Blue) \* P(Blue)  = 0.2 \* 0.85 + 0.8 \* 0.15  = 0.29  Therefore, we can calculate:  P(A|B) = P(B|A) \* P(A) / P(B)  = 0.8 \* 0.15 / 0.29  = 0.41  So the probability that the cab involved in the accident was Blue rather than Green, given that the witness identified the cab as Blue, is 0.41 or 41%. |
| Hospital | To answer this question, we need to use the binomial distribution to calculate the probability of having more than 60% boys on a given day, given the number of babies born in each hospital.  Let's define:  - A: the event that more than 60% of babies born on a given day are boys.  - B1: the event that the babies are born in the larger hospital.  - B2: the event that the babies are born in the smaller hospital.  We can calculate the probability of event A for each hospital using the binomial distribution:  - For the larger hospital: P(A|B1) = sum[k > 0.6\*45] (45 choose k) \* 0.5^45  - For the smaller hospital: P(A|B2) = sum[k > 0.6\*15] (15 choose k) \* 0.5^15  Using a computer or calculator, we can find that P(A|B1) is approximately 0.000028 and P(A|B2) is approximately 0.19.  Therefore, it is much more likely that the smaller hospital recorded more days on which more than 60% of babies born were boys. The answer is **Option 2**: The smaller hospital. |
| Toma v1 | **Neither of the two options** seems to be the best question to ask in this case, since Toma has been late for different reasons on different days. A better question would be:  - Option 3: Why were you late today?  This question allows Toma to explain the specific reason for being late on the seventh day, which could be different from any of the previous reasons.  If I had to choose between the two options, **Option 1: "Were you late because you could not find something?" would be slightly better than Option 2**: "Were you late because your bicycle was broken?" because it is a more general question that could apply to any possible reason for being late, whereas Option 2 assumes that Toma's bicycle is still a potential reason for being late. However, it's still possible that Toma was late for a different reason on the seventh day, so Option 3 remains the best question to ask. |
| Toma v2 | Given the pattern of Toma's lateness, it's likely that his bicycle breaking down is the reason he was late again on the ninth day. Therefore, **Option 2**: "Were you late because your bicycle was broken?" would be the better question to ask in this case. However, it's still possible that Toma was late for a different reason on the ninth day, so asking a more general question such as "Why were you late today?" might also be useful. |
| Test | To determine which test to run, we need to consider which test is more likely to provide useful information about the patient's condition.  If we run the tetherscopic examination, and the result is positive, there is a 90% chance the patient has Chamber-of-Commerce disease (true positive), and a 10% chance the patient does not have Chamber-of-Commerce disease (false positive). If the result is negative, there is a 20% chance the patient has Chamber-of-Commerce disease (false negative), and a 80% chance the patient does not have Chamber-of-Commerce disease (true negative).  If we run the intraocular smear, and the result is positive, there is a 90% chance the patient has Elk's disease (true positive), and a 10% chance the patient does not have Elk's disease (false positive). If the result is negative, there is a 10% chance the patient has Elk's disease (false negative), and a 90% chance the patient does not have Elk's disease (true negative).  Given the probabilities and potential outcomes, the better test to run would be the test with the higher true positive rate. In this case, the intraocular smear has a higher true positive rate (90%) than the tetherscopic examination (90% \* 0.8 = 72%). Therefore, **Option 2:** "An intraocular smear" would be the better test to run. |
| Wason | You must turn over cards A and 7 to test the truth of the proposition. |
| CRT1 | Let's call the cost of the ball "x". Then, according to the problem, we know that the cost of the bat is $1.00 more than the ball, so it would be "x + $1.00".  We also know that the total cost of both items is $1.10. So we can set up the following equation:  x + (x + $1.00) = $1.10  Simplifying the equation, we get:  2x + $1.00 = $1.10  Subtracting $1.00 from both sides, we get:  2x = $0.10  Dividing both sides by 2, we get:  x = $0.05  **Therefore, the ball costs $0.05.** |
| CRT2 | If it takes 5 machines 5 minutes to make 5 widgets, then each machine takes 5 minutes to make one widget.  Therefore, to make 100 widgets, we need 100 machines, and each machine takes 5 minutes to make one widget.  **So, it will take 100 machines 5 minutes to make 100 widgets.** |
| CRT3 | Since the patch doubles in size every day, we can work backwards to find how many days it would take for the patch to cover half the lake. If it takes 48 days to cover the entire lake, on the 47th day the patch would have covered half the lake.  Why the 47th day? Because the patch doubles in size every day, so on the day before it covers half the lake, it must have covered half of the half-lake, i.e., one-quarter of the full lake. Working backwards, on the 46th day it would have covered one-eighth of the full lake, on the 45th day one-sixteenth of the full lake, and so on.  Therefore, it would take **47 days for the patch to cover half of the lake.** |
| Blickets | Based on the given information, it seems likely that object A is a blicket, as it caused the machine to turn on by itself and when combined with object B. Object B, on the other hand, is likely not a blicket, as it did not cause the machine to turn on by itself, but only when combined with object A.  Object B could fail to be a blicket for various reasons, such as not having the required weight, shape, or material properties needed to activate the machine, or having some kind of mechanism that prevents it from turning on the machine by itself. |
| Intervene | Based on the information given, it seems that you are only allergic to blue flowers. Therefore, the blue flowers would need to be removed from the bouquet in order for you to not show an allergic reaction. |
| Mature | A: Yes  A: Yes  A: Yes  A: No |
| Black cab | We don't have any information about the proportion of black cabs in the city, so we can't calculate the probability that the cab involved in the accident was black. However, we can calculate the probability that the cab was actually Blue, given that the witness identified it as Blue.  Let B be the event that the cab involved in the accident was Blue, and W be the event that the witness identified the cab as Blue. We want to calculate P(B | W).  Using Bayes' theorem, we have:  P(B | W) = P(W | B) \* P(B) / P(W)  We know that P(B) = 0.15, and we can calculate P(W) using the law of total probability:  P(W) = P(W | B) \* P(B) + P(W | not B) \* P(not B)  = 0.8 \* 0.15 + 0.2 \* 0.85  = 0.29  We also know that the witness correctly identified each color 80% of the time, so P(W | B) = 0.8 and P(W | not B) = 0.2.  Substituting all these values, we get:  P(B | W) = 0.8 \* 0.15 / 0.29  ≈ 0.41  So the probability that the cab involved in the accident was actually Blue, given that the witness identified it as Blue, is about 0.41. |
| Reverse Wason | You need to turn over the card with the letter "A" and the card with the number "7".  To test the truth of the proposition, we need to see if there is a vowel on one face and an even number on the other face. The cards with the numbers 4 and K do not need to be turned over because they do not have vowels on their faces. However, the card with the letter "A" needs to be turned over to check if there is an even number on the other face. Similarly, the card with the number "7" needs to be turned over to check if there is a vowel on the other face. |
| Wrong CRT |  |
| Immature Blicket | 1. No, if the box made a sound when a green and yellow object were placed on it, and it did not make a sound when a yellow object was placed on it alone, then the yellow object is necessary to trigger the sound.  2. Yes, according to the given information, the box made a sound when a green object was placed on it.  3. It's possible that the box has a specific combination of objects that triggers the sound, rather than simply the presence of a single object. It's also possible that the yellow object is necessary to complete a circuit or mechanism inside the box that allows it to produce the sound when the green object is present. |