Test 1 Probability – Written Questions

1. Name an application of probability trees in computer science?	Decision Making Trees for Artificial Intelligence (AI)
2. What do self-learning computers use to learn new things?	Probability Trees
3. What is a famous example of a computer that used probability trees to learn new things?	Alpha Go (it taught itself to play go AND THEN taught itself to win AND THEN taught itself strategies humans don't know)
4. Which is more likely: A: Librarian, B: Librarian who loves books.	A – it has fewer restrictions so it is a larger group.
5. Which is more likely: A: A teacher who enjoys helping students, B: A teacher	B – it has fewer restrictions so it is a larger group.
6. Which is more likely: A: A hot, humid day resulting in a thunderstorm in the afternoon. B: A thunderstorm.	B – it has fewer restrictions so it is a larger group.
7. What is the probability of rolling two fours with a pair of dice?	1/36
8. What is the probability of pulling a Jack from a card deck?	1/13
9. What is the probability of pulling a heart from a card deck?	1/4
10. What is the probability of flipping two heads with a pair of coins?	1/4
11. What is the sample space for flipping a coin?	S={H, T}
12. What is the sample space for drawing a suit in a deck?	S={Heart, Clubs, Spades, Diamonds}
13. What is the sample space for a rolling a dice?	S={1, 2, 3, 4, 5, 6}
14. Independent or dependent: Guessing each question on a multiple-choice test.	Independent.
15. What is the Excel symbol for multiplication?	*
16. What is the Excel symbol for division?	/
17. What is the Excel symbol for power?	^
18. What is the Excel symbol for not equals?	<>
19. What is the Excel symbol for greater than or equal to?	>=
20. What is the Excel symbol for less than or equal to?	<=
21. What is the probability of getting perfect on the SATs?	0
22. What is the probability that if you pick a random phone number, and call it, that the person who answers has just sneezed?	About 1/40,000

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