QUICK REVIEW: CLAST SKILL II.D.3

Identify the probability of a specific outcome

Some Guidelines:

* Complement Rule: $P(A) = 1 - P(A^C)$

* General Addition Rule: For any two events, the probability of A or B

is $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

  [$P(A \cap B) = 0$ when A and B are disjoint events.]

* General Multiplication Rule: For any two events, the probability of A and B is

$P(A \cap B) = P(A) \times P(B \mid A)$

  [$P(B \mid A) = P(B)$ when A and B are independent events.]

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1. Suppose the probability of getting a 4.0 GPA at Valencia Community College is 4%. What is the
    probability of NOT getting a 4.0 GPA?

    a) 0.36   b) 0.96   c) 0.04   d) 0.16

2. A cookie jar contains five chocolate cookies, two peanut-butter cookies, and seven almond cookies.
    If two cookies are grabbed from the jar at random without replacement. What is the probability
    that neither cookies are almond cookies?

    a) $\dfrac{7}{14} \times \dfrac{7}{14}$ b) $\dfrac{7}{14} \times \dfrac{6}{13}$ c) $\dfrac{7}{14} \times \dfrac{8}{13}$ d) $\dfrac{7}{14} \times \dfrac{9}{14}$

3. Suppose 50% of laser printers sold at Orange County are manufactured in the US, 30% in China,
    10% in Mexico, 10% in other countries. What is the probability that laser printer selected at
    random is made in China or Mexico?

    a) 0.03   b) 0.35   c) 0.40   d) 0.60

4. If 50% of laptops auctioned at e-bay are made in Taiwan, 20% in Canada, 20% in the U.S. and 10%
    in other countries. What is the probability that two laptops selected at random consecutively are
    made in other countries?

    a) 0.20   b) 0.10   c) 0.02   d) 0.01

5. Based on a survey done by a statistics class, the probability that a violin needs a monthly tuning is
    0.30; the probability that it needs string(s) replacement is 0.60; and the probability that the violin
    needs either a monthly tuning or string(s) replacement is 0.72. What is the probability that both a
    monthly tuning and string(s) replacement are needed?

    a) 0.90   b) 0.72   c) 0.18   d) 0.12

6. Suppose 44% of an apartment tenants lease a car, 55% of them subscribe to high-speed internet,
    and 30% of them lease a car and subscribe to high-speed internet. If you randomly ask one of these
    tenants, what is the probability that this person is either leasing a car or subscribing to high-speed
    internet, or both?

    a) 0.95   b) 0.30   c) 0.69   d) 0.19