***Compound Probability – Exam Review #9***

*Match each type of event to its correct formula. Then, match it to a corresponding example of that kind of event.*

\_\_\_\_\_ , \_\_\_\_\_ **1.** Independent **A.** P(A or B) = P(A) + P(B) **W.** drawing a spade or an 8

\_\_\_\_\_ , \_\_\_\_\_ **2.** Dependent **B.** P(A and B) = P(A) P(B following A)` **X.** drawing a spade then an 8 **without replacement**

\_\_\_\_\_ , \_\_\_\_\_ **3.** Mutually exclusive **C.** P(A and B) = P(A) P(B) **Y.** drawing a spade then an 8 **with replacement**

\_\_\_\_\_ , \_\_\_\_\_**4.** Not mutually exclusive **D.** P(A or B) = P(A) + P(B) – P(A and B) **Z.** drawing a spade or a heart

*After a doctor’s appointment, the doctor offers you and your sibling a lollipop from a jar. There are 3 pink lollipops, 6 red lollipops, 9 green lollipops, and 12 yellow lollipops. What is the probability of you and your sibling choosing lollipops in the given order? (First, decide: do you put the lollipop back after you choose it?)*

**5**. P(green, pink)

**6**. P(red, red)

**7**. P(pink, yellow)

*For a magic trick, you are asked to draw one playing card, replace it, and then draw a second card. What is the probability of you drawing cards in the given order?*

**8**. P(club, red)

**9**. P(3, face card)

**10**. P(ace, black)

**11**. P(not diamond, even #)

*You are rolling two six-sided dice. Calculate the probability of rolling both dice and getting the given sums.*

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| --- | --- | --- |
| Sum | Combinations | # of Combos |
| 4 | 2+2 | 1 |
| 5 | 2+3, 3+2 | 2 |
| 6 | 2+4, 3+3, 4+2 | 3 |
| 7 | 2+5, 3+4, 4+3, 5+2 | 4 |
| 8 | 2+6, 3+5, 4+4, 5+3, 6+2 | 5 |
| 9 | 3+6, 4+5, 5+4, 6+3 | 4 |
| 10 | 4+6, 5+5, 6+4 | 3 |
| 11 | 5+6, 6+5 | 2 |
| 12 | 6+6 | 1 |

**12**. P(4 or 7) **13**. P(5 or 11)

**14**. P(8 or 9)