Ozra Rezaie – Logical Thinking Test

1. How many ways could Alice have filled out the answer sheet?
   Here I would like to use Binary code table: T=True , F= False.

F	F	F	F
F	F	F	T
F	F	T	F
F	F	T	T
F	T	F	F
F	T	F	T
F	T	T	F
F	T	T	T
T	F	F	F
T	F	F	T
T	F	T	F
T	F	T	T
T	T	F	F
T	T	F	T
T	T	T	F
T	T	T	T

As you see there is only 1 way to a great score.

And
There is 4 possible way to miss one question.

Then is answer will be: **1+4=5**

Correct answer: **5 ways**

2. If two words are next to each other, they must share at least one letter and not be the same length. There are six words below and the word on the far left is "CAT." Place all the words in a way that satisfies the condition above.

   List of words: - cat (already used) - win - moon - stop - study – rent

1) **CAT**
2) **STOP** (Because Cat and Stop, they share letter **T.** Cat has 3 letters and Stop has 4 letters.)
3) **STUDY** (Because Stop and Study, they share letters **S** and **T.** Stop has 4 letters and Study has 5 letters.)
4) **RENT** (Because Study and Rent, they share letter **T.** Study has 5 letters and Rent has 4 letters.)
5) **WIN** (Because Rent and Win, they share letter **N.** Rent has 4 letters and Win has 3 letters.)
6) **MOON** (Because Win and Moon, they share letter **N.** Win has 3 letters and Moon has 4 letters.)

Correct answer: **CAT – STOP – STUDY – RENT – WIN – MOON**

3. In front of you are 3 chests, each with a label above it:
   1) 100% gold coins
   2) 50% gold / 50% silver coins
   3) 100% silver coins

   Which chest should you pick a coin from?

   There are some ways in mathematics probabilities:

   If I pick a coin from **Chest 1**, there are two possibilities:
   - It could be 100 silvers coins.
   - It could be 50 coins of both gold and silver.

   If I pick a coin from **Chest 2**, here will be two possibilities too:
   - It could be 100 silvers coins.
   - It could be 100 gold coins.

If I pick a coin from **Chest 3**, here will be two possibilities too:

- It could be 100 gold coins.
- It could be 50 coins of both gold and silver.

Then my answer will be the second chest: **50% gold / 50% silver coins**, because I have a big chance to find the gold coins.

Correct answer: **50% gold / 50% silver coins**

4. Arrange the tiles so that
   - All six numbers are in a row
   - No number is between two others that are both smaller than it, and
   - 2 is the rightmost number

   If an arrangement satisfies all three constraints, what number(s) might be in the leftmost position?

3	5	19	50	99	

1) 2
2) **3** (3<5, 3>2)
3) **5** (5<19, 5>3)
4) **19** (19<50, 19>5)
5) **50** (50<99, 50>19)
6) 99

Correct answer:

99	50	19	5	3	2

5. Now you know that the speed of train is four times that of bike's speed. Also, the bike's speed is two times faster than the walking speed. Who do you think will reach the hotel first?
   the speed of train=4x that of bike's speed
   bike's speed = 2x faster than the walking speed

- As I see the bike's speed is two times faster than the walking speed and so the time that the second person needs to reach the hotel is equal to the time the first person is walking to reach half the way. Then, biking the whole way will be faster than taking the train.

Correct answer**: The second one that takes bike will reach the Hotel faster.**

6. Can you solve the number series in the picture below? Which 3rd number is the logical continuation?

   1) {[(9/9)*9]*2}=18 ⟶ {[1*9]*2}=18 ⟶ {9*2}=18 ⟶ 18 = 18

   2) {[(36/6)*2]*2}=24 ⟶ {[6*2]*2}=24 ⟶ {12*2}=24 ⟶ 24 = 24

   3) {[(4/2)*5]*X}=30 ⟶ {[2*5]*X}=30 ⟶ {10*X}=30 ⟶ X = 30/10 = 3

Correct answer: **3**