

# **TestFunda**

## **Puzzles-of-the-week**

### **Book 2**



**WE ALL FIT LIKE PIECES OF A PUZZLE. EVERYBODY'S INPUT  
AND THEIR JOURNEYS AND WHERE THEY'VE BEEN HELP PUT  
THAT PUZZLE TOGETHER.**

**- MELODY THORNTONZZ**

## Table of Contents

Puzzle #01: Fifty Light Bulbs .....	1
Puzzle #02: Floral Introductions .....	2
Puzzle #03: Robots at the Moon Base.....	3
Puzzle #04: Queen in a Quandary .....	4
Puzzle #05: Olympics Results.....	5
Puzzle #06: The Fake Diamond .....	6
Puzzle #07: The Fake Diamonds - Take Two .....	7
Puzzle #08: The Fake Diamonds - Take Three .....	8
Puzzle #09: Boiling an Egg .....	9
Puzzle #10: Gabbar Singh Ke Sholay .....	10
Puzzle #11: Prachi and Her Flights .....	11
Puzzle #12: Sally's Dice.....	12
Puzzle #13: Dividing the Inheritance.....	13
Puzzle #14: The Voyage of the Monkeys.....	14
Puzzle #15: The Voyage of the Monkeys - Take Two .....	15

## Answers

Puzzle #01: Fifty Light Bulbs .....	17
Puzzle #02: Floral Introductions .....	18
Puzzle #03: Robots at the Moon Base.....	20
Puzzle #04: Queen in a Quandary .....	21
Puzzle #05: Olympics Results.....	22
Puzzle #06: The Fake Diamond .....	23
Puzzle #07: The Fake Diamonds - Take Two .....	24
Puzzle #08: The Fake Diamonds - Take Three .....	25

Puzzle #09: Boiling an Egg .....	27
Puzzle #10: Gabbar Singh Ke Sholay .....	28
Puzzle #11: Prachi and Her Flights .....	29
Puzzle #12: Sally's Dice.....	31
Puzzle #13: Dividing the Inheritance.....	32
Puzzle #14: The Voyage of the Monkeys .....	33
Puzzle #15: The Voyage of the Monkeys - Take Two .....	34
About TestFunda.com .....	35

# PREFACE

*For the past couple of years, CAT and other MBA entrance exams have shown a trend towards questions testing a student's ability to apply Mathematical Principles and Analytical Reasoning to solve problems. The unpredictable nature of CAT has ensured that most students are never fully prepared to ace the exam. This is because students limit their preparation to just the learning and practice of core concepts of Mathematics, Verbal Ability and Data Interpretation & Logical Reasoning. However, to bell the CAT, divergent thinking is required which is why experts also recommend solving an eclectic mix of Puzzles, Crosswords, Riddles and Brain Teasers. These enhance the problem-solving skills of CAT aspirants and encourage them to think out-of-the-box.*

*We, at TestFunda.com, feel that solving puzzles not only helps sharpen one's logical acumen, but also gives immense pleasure and satisfaction. The puzzles in this book will give students that extra edge and confidence needed to be ready for any surprise that CAT might throw their way.*

*We are sure that our readers will benefit greatly from these books. They shall provide a much-needed break from long study hours as well as high-quality cerebral recreation.*

## Puzzle #01: Fifty Light Bulbs

The Prime Minister of Einsteinia lost the Mensa Annual Challenge and committed suicide. The King of Einsteinia had some doubts on the abilities of the Deputy Prime Minister so he devised a plan to test his intelligence before promoting him.

The King put 50 light bulbs in a room and put the corresponding 50 switches in another room. He switched on "x" number of these bulbs. He told the Deputy Prime Minister the number of bulbs (x) that were switched on and gave him the task of dividing the fifty switches into two groups such that each group had equal number of lit bulbs. The Deputy Prime Minister was allowed to go to the room with the bulbs or to the room with the switches but could not see one room from the other. By looking at the switch there is no way to tell whether the corresponding bulb is on or off. Flipping the switch each time toggles the state of the corresponding bulb.

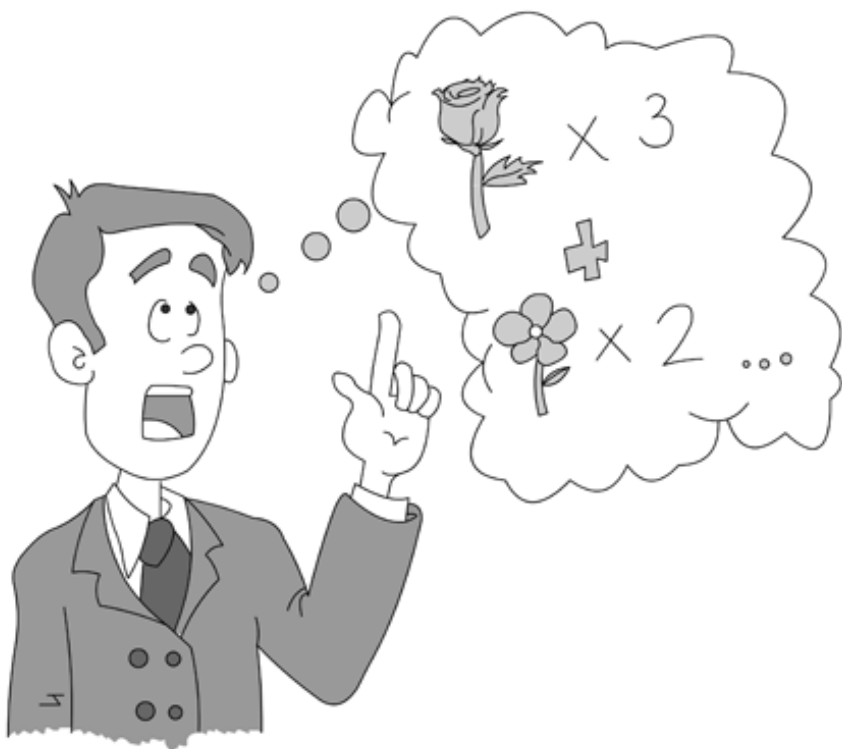
Can you help the Deputy Prime Minister devise a strategy? Please provide detailed solution and justification for each step.



## Puzzle #02: Floral Introductions

Professor Frankstein and his wife were invited to a ball in Newtonia to celebrate the discovery of a new metal. When they arrived there, they found six other couples. In Newtonia, there was a custom according to which people meeting each other for the first time exchanged a flower.

After all the people finished exchanging flowers, Prof. Frankstein decided to find out how many flowers each person had received and started interrogating everyone, his wife included. He got thirteen distinct replies. How many flowers did Mrs. Frankstein receive?



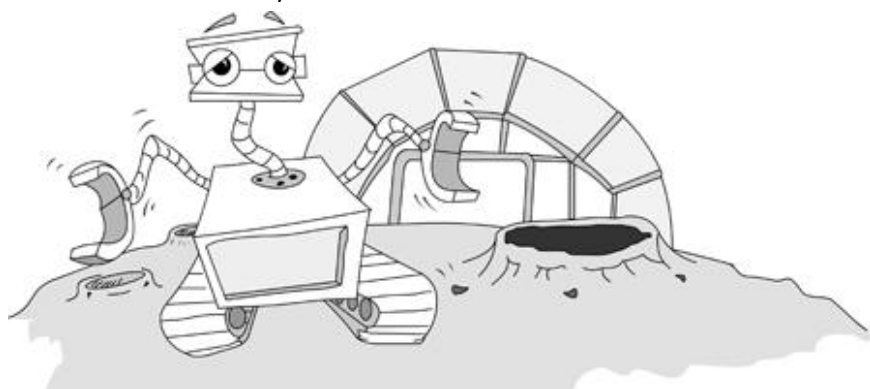
## Puzzle #03: Robots at the Moon Base

You are the commander of the first manned base on the moon. You have a team of 5 scientists and 15 multipurpose robots. One day your whole team is busy preparing for the fast approaching sun-storm and you need to wisely allocate resources for the hundreds of the tasks that need to be completed. Otherwise, the very survival of the moon base will be in danger.

One of the tasks involves bringing back the precious equipment from a monitoring station in a crater that is 10 kilometers away. It is too dangerous for human scientists to venture out and this task will need to be performed by one of the robots. Unfortunately, each fully charged robot has enough energy only to go to the monitoring station but not for coming back. How will you accomplish this task using the minimum number of robots?

### Notes:

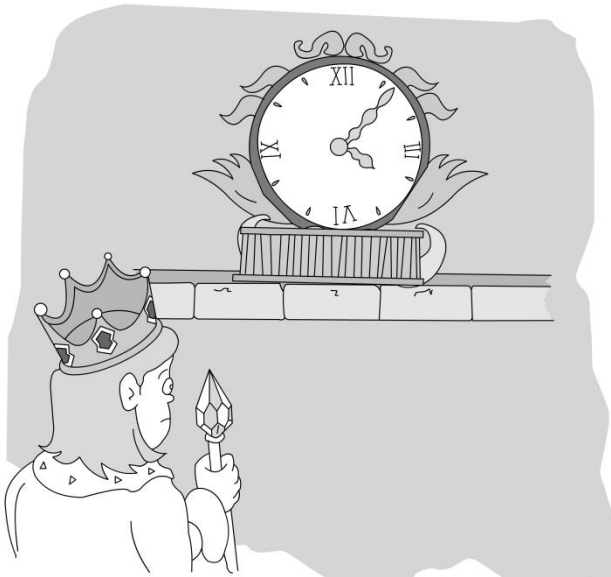
1. All the robots are same in every respect.
2. Each robot can instantaneously transfer any part of its energy to another robot when they are in physical contact with each other.
3. All the robots used in performing this task should safely return to the base immediately after completing the task.
4. The robots consume energy only when they are moving.
5. The moon base station has enough energy to charge the robots as and when required.
6. Robots can be remotely controlled from the base station.



## Puzzle #04: Queen in a Quandary

Queen Georgia was very attached to the clock that was gifted to her by her late father, King Eli. It was a precious heirloom that had been passed down from generation to generation. She never allowed anyone to touch that clock and even wound it herself. In fact, no other device for measuring time was permitted in her castle. One day she forgot to wind her clock before going to sleep. When she awoke, the clock had stopped. There was no way to reset it to the correct time. Then she remembered that an aunt of hers, who had a clock, stayed in a mansion several miles away.

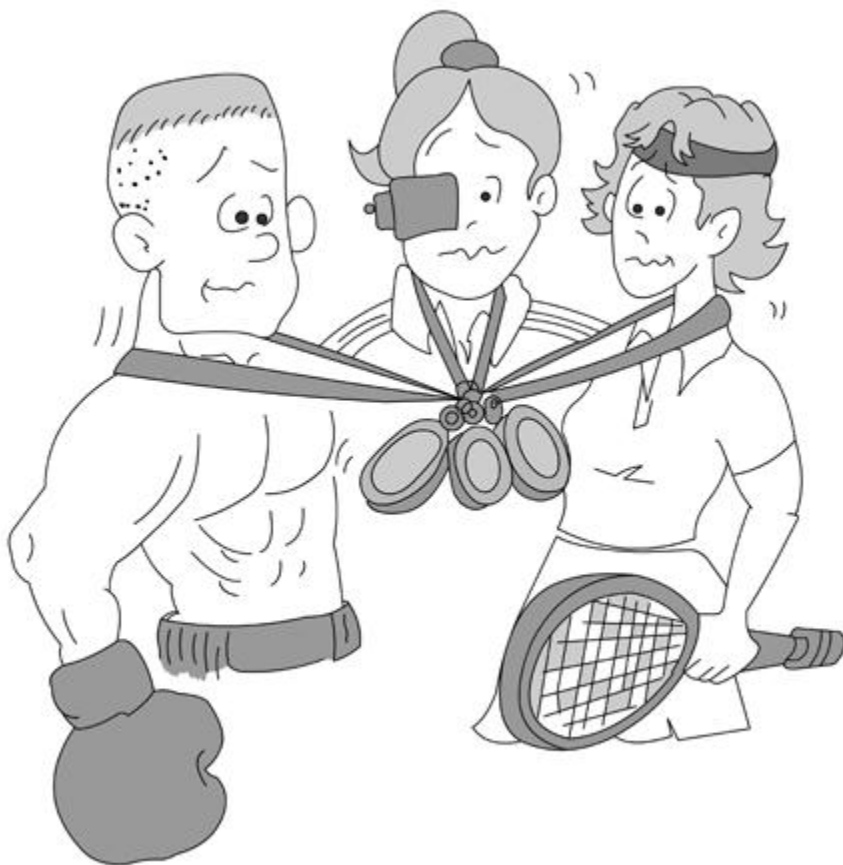
The clock couldn't be moved as it was attached to the wall. So, Queen Georgia thought about it and then sent her messenger to her aunt's house with some instructions. The messenger ran to the aunt's house at a constant speed, rested there for some time and then came running back at the same speed. When the messenger came back, Queen Georgia reset her clock to the exact time. How did she do it?





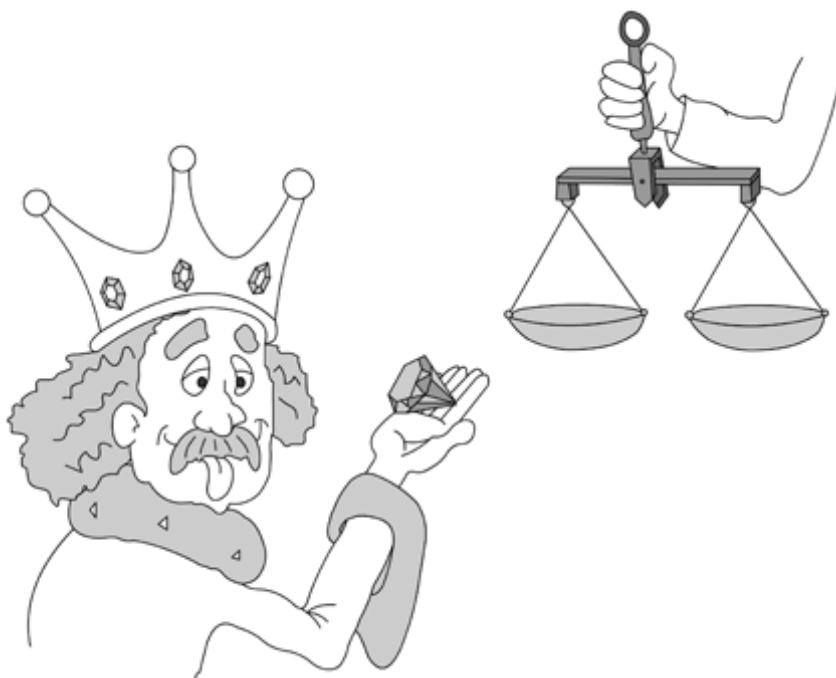
## Puzzle #05: Olympics Results

Last Saturday, two popular newspapers, RNA and Mid-Night, carried a story about three Indian medal winners: Viren (Boxing), Anindra (Shooting) and Sanaa (Tennis). Between them, they had earned India one Gold, one Silver and one Bronze medal. Mid-night published that Viren won the Gold medal while Anindra won the Silver medal. RNA published that Sanaa won the gold medal while Viren won the Silver Medal. In fact, the newspapers had goofed up - both had reported only one medal winner correctly. Can you tell who had won which medal?



## Puzzle #06: The Fake Diamond

King of Einsteinia wanted to marry off his daughter. Many suitors wanted to marry the princess. So, the king devised a competition to find the most worthy of them all. He put 27 identical looking diamonds in a box. He then announced that one of the 27 diamonds was a fake. The fake diamond was identical to the other diamonds in all respects except that it had a slightly different weight. The challenge was to find the fake diamond using only a simple pan balance. What is the minimum number of weighings required to find the fake? Provide a detailed explanation with your answer.



## Puzzle #07: The Fake Diamonds - Take Two

King of Einsteinia wanted to marry off his daughter and he devised the 27 diamond challenge to find the most worthy suitor for his daughter. Out of the hundreds of suitors for the princess ten got the correct answer. To find the smartest of the shortlisted suitors, the king devised another challenge.

He got three real diamonds of the same shape, size and weight - one each of blue, pink and white colour. Then he got three fake diamonds of the same colours and mixed them up with the real diamonds. You could not tell the real diamonds from the fake ones by looking at them. All three fake diamonds are of the same weight but a bit lighter than the real diamonds. The new challenge was to separate the real and fake diamonds into two piles using only a simple pan balance. What is the minimum number of weighings required to separate the diamonds? Provide a detailed explanation with your answer.

## Puzzle #08: The Fake Diamonds - Take Three

The King of Einsteinia is at his wit's end. He is unable to choose a groom from the bevy of suitors for his daughter. The previous challenge he devised to find the future king resulted in a tie. He devises another challenge that he hopes will finally identify the most intelligent of them all.

He puts together 12 identical looking diamonds out of which one is a fake. The only difference between the fake and the real diamonds is that the fake diamond's weight is a little different from the rest. What is the minimum number of weighings required to identify the fake diamond using a simple pan balance? Provide a detailed explanation with your answer.

## Puzzle #09: Boiling an Egg

You have a piece of string which when set on fire from one end takes 120 minutes to burn completely. It has a property that the time taken to burn a distance "D" from one end is the same as the time taken to burn a distance "D" from the other end. The rate of burning is not uniform – different parts of the string will take different amounts of time to burn.

You need to boil an egg for exactly 15 minutes using the string as a timer. How will you do it?



## Puzzle #10: Gabbar Singh Ke Sholay

You are trekking in the hills of Chambal when you are caught by Gabbar Singh. He takes out his special gun with 12 chambers for bullets. He opens the barrel and shows you that all the twelve chambers are empty. He then takes three bullets and puts them in the gun touching each other. He then took another three bullets and placed them in the gun touching each other but on opposite side of the first three bullets. He closes the gun and spins the barrel.

Now the gun has six chambers with bullets and six empty chambers. He puts the gun to your head and pulls the trigger - the chamber is empty! Gabbar Singh laughs maniacally and says – “Kamal ho gaya, tu to bachh gaya (miracle happened, you survived). I will pull the trigger once more – if you survive again I will let you go. Do you want me to spin the barrel before I pull the trigger again?” Will you ask Gabbar to spin the barrel before he pulls the trigger again? Provide a detailed explanation.



## Puzzle #11: Prachi and Her Flights

Prachi is an actress who has to travel abroad for her shoots, giving her the opportunity to extend her social circle to all parts of the world. In November, she flew to different destinations and flew a different airline every single time. She always made it a point to speak to the person sitting beside her. Also, the person sitting next to her was always from a profession different from those she had met on other flights. She flew Caesar Airlines, Einstein Airlines, Mussolini Airlines, Stratus Airlines and Trump Airlines to Athens, Berlin, NYC, Rome and Toronto and met an Actress, a Choreographer, a Fashion Designer, a Realtor and a Wrestler, not necessarily in that order.

Here's the catch. Given below are some clues about her travel.

1. She flew every Friday in November (starting on Nov 2nd).
2. Prachi flew Trump Airlines, sat beside the Fashion Designer and took a flight to Athens in three consecutive flights in the order prescribed above.
3. She flew Caesar Airlines earlier in the month than she flew to Berlin which in turn was some time earlier than when she gossiped with another actress on board their flight.
4. Prachi met the choreographer on a flight that was some time before the flight that she took to Rome.
5. She did NOT meet the Realtor on the flight to Toronto.
6. She neither flew Einstein Airlines to Rome nor did she fly Trump Airlines when she sat beside the choreographer.
7. She flew Stratus Airlines exactly two weeks before the flight on which she met the wrestler.
8. She spoke to the actress on a flight that she had NOT taken to Athens.

Can you deduce the dates when she flew, the airline she flew, the destinations she traveled to and the profession of the person sitting beside her?

## Puzzle #12: Sally's Dice

Sally had three dice with a unique alphabet printed on each face instead of numbers. All 18 alphabets on the dice were distinct. She threw the dice together a few times and on rearranging the letters that appeared on the upper surfaces, she formed the following words:

RID, BOY, ZIP, HEP, DIN, TRY, YES, COT, MIC, LET, DOT, BUN, PAN

Using this information, deduce the letters on each Die.





## Puzzle #13: Dividing the Inheritance

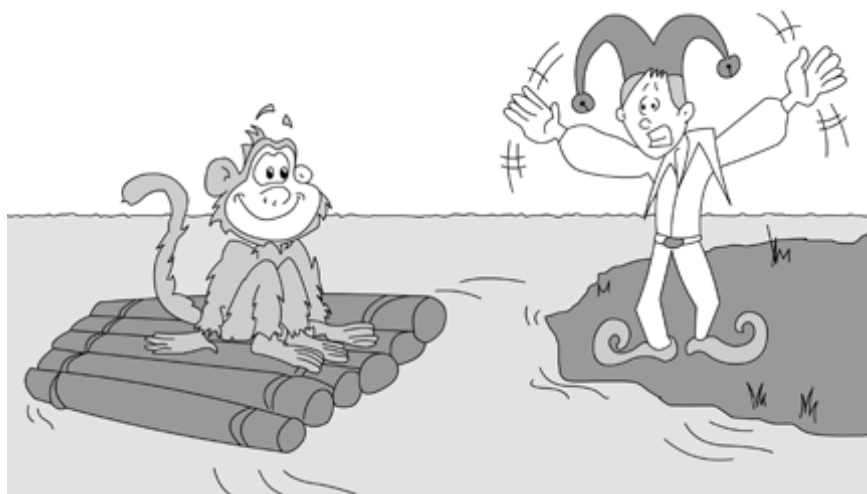
Your far off uncle has left behind a large rectangular plot of land that has to be divided equally between you and your cousin. Your uncle loved puzzles and decided to make you solve one last one. In his will he instructed that you and your cousin need to divide the plot evenly using only one linear partition.

The catch is that a rectangular section of the plot is barren. The barren land also must be shared equally between you and your cousin. If you are not able to divide the plot equally, the land will be donated to the government and you two will be left with nothing. How will you divide the land? Provide a detailed explanation with your answer.



## Puzzle #14: The Voyage of the Monkeys

The new king of Einsteinia was a cruel man who hated 'Performing Arts' and hence started committing atrocities against performers especially those who performed with animals. One night, four jugglers, each one along with his monkey, attempted to cross a river and flee to Newtonia. It was safe not to swim across the river. All they had was a small raft that could accommodate a maximum of three living creatures at any given time. A monkey should not be present with other masters if its own master is not present, as in such a case the monkey creates huge noise which should be avoided. All the humans and only one monkey know how to raft. Devise a plan to help them flee Einsteinia safely in the least number of trips. Provide a detailed explanation for your answer.



## **Puzzle #15: The Voyage of the Monkeys - Take Two**

The four jugglers were successful in fleeing to Newtonia along with their monkeys (The Voyage of the Monkeys). However, the king of Einsteinia conquered the kingdom of Newtonia and started committing the same kind of atrocities on his new subjects. The jugglers thought of fleeing to Edisonia in order to save the lives of themselves and their monkeys. En route, they met another juggler with his monkey who wanted to flee along with them. The jugglers agreed to take the new juggler with them.

The only way to escape to Edisonia was to cross the same river they crossed earlier. Also they had to use the same kind of raft. So the raft could accommodate a maximum of three living creatures at a time. Also a monkey should not be present with other masters if its own master is not present, as in such a case the monkey creates huge noise. All the five jugglers and only one monkey knew how to raft.

Devise a method to transport all of them across to Edisonia in the least possible trips. Provide a detailed solution for your answer.

# ANSWERS

## Puzzle #01: Fifty Light Bulbs

The Deputy Prime Minister selected the first "x" switches from the 50 switches (he knows "x" is the number of lit bulbs). Let us assume that "n" switches out of these are in on position. So the other group has  $(x - n)$  switches in on position. Total number of lit bulbs is  $n + (x - n) = x$ .

Now the Deputy Prime Minister flips all the x switches in the group of switches he selected. So the number of switches in on position changes from "n" to  $(x - n)$ . The other group already has  $(x - n)$  switches in on position. So, now both the groups have equal number of lit bulbs.

[Discuss](#) the solution with TestFunda users.

## Puzzle #02: Floral Introductions

Since there are 7 couples in all – there are 14 persons at the ball. Let us call these couples: (1A/1B), (2A/2B), (3A/3B), (4A/4B), (5A/5B), (6A/6B) and (7A/7B).

No one gave himself or herself a flower, or exchanged one with his or her partner. So, the maximum number of flowers one could get was  $14 - 2 = 12$ . Since there are thirteen distinct numbers of flowers, these numbers must be 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12.

The person who exchanged 12 flowers (say person 1A), exchanged flowers with all other persons excluding him/herself and his/her spouse. So, all other persons (apart from this person and his/her partner) got at least one flower each. Since there are only 12 other persons apart from him/herself and his/her spouse, the other 12 persons would have got at least 1 flower. So, only the number '0' is left which is the number of flowers his/her spouse got. Therefore, the partner of the person who exchanged 12 flowers must be the person who exchanged '0' flowers (person 1B).

Now we can extend this logic to other couples. The person who exchanged 11 flowers (say person 2A), exchanged flowers with all other persons apart from 1B (0 flowers) and own spouse - 2B. So, these 11 persons would all have got one flower from 2A and one from 1A – at least 2 flowers. So these 11 people got at least 2 flowers. The only number left is 1. Therefore, the partner of the person who exchanged 11 flowers (2B) must be the person who exchanged 1 flower.

Similarly,

The partner of the person who exchanged 10 flowers is the person who got 2 flowers.

The partner of the person who exchanged 9 flowers must be the person who got 3 flowers.

The partner of the person who exchanged 8 flowers must be the person who got 4 flowers.

The partner of the person who exchanged 7 flowers must be the person who exchanged 5 flowers.

The partner of the person who exchanged 6 flowers must be the person who exchanged 6 flowers.

Therefore, the numbers of flowers exchanged by the persons at the ball are: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 6. The only number repeated is 6. So, Prof. Frankstein must be the person with 6 flowers. So, his spouse should have got 6 flowers.

[Discuss](#) the solution with TestFunda users.

## Puzzle #03: Robots at the Moon Base

You need three robots to complete the task.

First send three fully charged robots (call them A, B and C) to a point  $\frac{1}{3}$ rd of the distance to the monitoring station (say point X). All three will consume  $\frac{1}{3}$ rd of their energy on the way to this point. At 'X' A will transfer  $\frac{1}{3}$ rd of its energy to C and return to base. B and wait at point X and C will travel another  $\frac{1}{3}$ rd of the distance to point Y (point Y is  $\frac{2}{3}$ rd of the distance from the base station to the monitoring station). Now, B and C both have  $\frac{2}{3}$ rd of the energy left.

A will charge itself at the base station and travel to point X where it will transfer  $\frac{1}{3}$ rd of its energy to B and then it will return to the base to recharge itself. B will travel to point Y and transfer  $\frac{1}{3}$ rd of its energy to C and then B will return to the base. C will be fully charged and will travel to the monitoring station pick up the equipment and travel back to point X.

Robot A will again travel to point X and meet Robot C there. A will transfer  $\frac{1}{3}$ rd of the energy to C and both will return safely to the base station.

[Discuss](#) the solution with TestFunda users.



## Puzzle #04: Queen in a Quandary

Queen Georgia set her clock to 12:00 when the messenger left for her aunt's house. When the messenger arrived at her aunt's house, he noted the exact time and then rested. He left the aunt's house exactly 2 hours later. He traveled at the same speed in both the directions. This way, when he arrived back, the total elapsed time was 2 hours plus twice the travel time (say  $t$ ).

So, when the messenger came back, Queen Georgia's clock read ( $12:00 + 2:00 + 2t$ ). So, she can immediately calculate the value of " $t$ " by seeing the time of arrival of the messenger. The messenger had noted the exact time in the aunt's clock (say " $T$ ") just before he left for the journey back. It took him " $t$ " time to travel back. So, the correct time when the messenger came back was ( $T + t$ ). So, Queen Georgia knew the correct time as both of these are known quantities.

[Discuss](#) the solution with TestFunda users.

## Puzzle #05: Olympics Results

Each newspaper had published one incorrect statement.

According to Mid-night, the combination was: Viren - Gold and Anindra - Silver. Since only one statement is true, the correct combination could be:

- a. Viren - Gold; Sanaa - Silver; Anindra - Bronze OR
- b. Sanaa - Gold; Anindra - Silver; Viren - Bronze

According to RNA, the combination was: Sanaa - Gold and Viren - Silver. Since only one statement is true, the correct combination could be:

- a. Sanaa - Gold; Anindra - Silver; Viren - Bronze OR
- b. Anindra - Gold; Viren - Silver; Sanaa - Bronze

The common combination between the two newspapers is: Sanaa - Gold; Anindra - Silver; Viren – Bronze. So, that is the correct combination.

[Discuss](#) the solution with TestFunda users.

## Puzzle #06: The Fake Diamond

You need to use the pan balance a minimum of four times in order to identify the fake one. Separate the diamonds into three stacks of nine diamonds each. Let's call them A, B and C. Weigh stack A against B and then A against C. One of the stacks will be of different weight - either lighter or heavier than the other two. You now know whether the fake diamond is heavier or lighter than the others.

Take the stack with the different weight and break it into three stacks of three diamonds each. Let's call these stacks D, E and F. Weigh stack D against E. If D and E are equal, then F is the odd stack. If D and E are not equal, the lighter or heavier (based on the A, B, C comparison) is the odd stack.

You now have three diamonds left. Let's call them G, H and I. Weigh G and H. If G equals H, then I is the odd and is lighter or heavier (based on the A, B, C comparison). If G and H are not equal, then the lighter or heavier (based on the A, B, C comparison) is the fake diamond.

[Discuss](#) the solution with TestFunda users.

## Puzzle #07: The Fake Diamonds - Take Two

You need two weighings to separate the diamonds. Let us call the diamonds: (B1, B2); (P1, P2); (W1, W2). One in each set is fake and hence lighter than the other.

First weighing: Put B1 and P1 on one side and B2 and W1 on the other side.

**Case 1:** The two sides balance - so, each side of the balance has one fake and one real diamond. So, one of P1 or W1 is a fake. Weigh P1 against P2. If P1 is lighter then it means that P1 is a fake and W1 is real. So, the fake diamonds are P1, B2 and W2 and the other three are real.

If P2 is lighter then B1, W1 and P2 are fakes and the other three are real.

**Case 2:** The two sides don't balance. Let us say side containing B1 and P1 is heavier. Then B1 is definitely real. Following combinations are possible:

Real	Fake
B1	B2, P1, W1
B1, P1	B2, W1
B1, P1, W1	B2

Now weigh P1 against W2. If P1 is lighter then P1 is fake and W2 is real. Similarly, if P1 is heavier then it is real and W2 is fake. So we now know the authenticity of all the diamonds.

If P1 and W2 are same weight then it means that P1 and W1 are of different weights. That case is only possible if P1 is real and W1 is fake (see the table above). Hence, we again know the authenticity of all the diamonds.

[Discuss](#) the solution with TestFunda users.

## Puzzle #08: The Fake Diamonds - Take Three

You can identify the fake diamond in three weighings.

Attach a unique number to each diamond viz. 1, 2,...12. Divide the diamonds into 3 groups: diamonds 1-2-3-4, diamonds 5-6-7-8 and diamonds 9-10-11-12. Now weigh diamonds 1-2-3-4 against diamonds 5-6-7-8.

**Case 1:** The two sets are equal; the fake diamond is in group 9-10-11-12. So when you weigh the second time, you weigh diamonds 9 and 10 against diamonds 1 and 2. (This is since you know that 1 and 2 weigh the same.) If both sides are balanced then one of 11 or 12 is a fake. For the third weighing, weigh diamond 11 against diamond 1. If both sides balance again, we know it's diamond 12. If, in that last weighing, it wasn't balanced then we know it's diamond 11.

If in the second weighing (9-10 against 1-2) the pans were not balanced then you weigh diamond 9 against diamond 1. If it's balanced, you know it's diamond 10, if it isn't, it's diamond 9.

**Case 2:** Now suppose when the diamonds were weighed for the first time, both sides weren't even. Let us say 1-2-3-4 went up and 5-6-7-8 went down – then 9-10-11-12 are real. For the second weighing weigh 1-2-3-8 against 4-9-10-11. There are three possibilities:

**Case 2A:** Side 1-2-3-8 went up. One of the diamonds 1,2,3 is a fake and is lighter than the others. Now weigh 1 against 2. If both are balanced then 3 is a fake else the diamond on the side that went up is a fake.

**Case 2B:** Side 1-2-3-8 went down. Diamond 8 is a fake and heavier or diamond 4 is a fake and lighter. Now weigh 8 against 1. If 8 goes down

then it is a fake else 4 is a fake.

**Case 2C:** Both sides are balanced. One of the diamonds 5-6-7 is a fake

and heavier than the others. Now weigh 5 against 6. If both are balanced then 7 is a fake else the diamond on the side that went down is a fake.

[Discuss](#) the solution with TestFunda users.

## Puzzle #09: Boiling an Egg

Cut the string from the centre. Now you have two parts each of which will take 60 minutes to burn completely, if set on fire from one end. This is because the string is symmetrical around its centre as stated in the puzzle.

Now set fire to one of the pieces of the string from both ends and at the same time set fire to the other piece only from one end. The string that is burning from both ends will take 30 minutes to burn completely – it is burning at twice the rate.

At the end of 30 minutes set fire to the other end of the string that is burning only from one end and at the same time start boiling the egg. This piece of string had 30 minutes left to burn, but since now it is lit from both ends, it will take only 15 minutes to burn completely.

[Discuss](#) the solution with TestFunda users.

## Puzzle #10: Gabbar Singh Ke Sholay

If you spin the barrel, then you will die if the barrel stops at one of the bullets - the probability of you dying is  $6/12 = 1/2$ .

If you don't spin the barrel then you will die only if the current chamber is the one just preceding a chamber with the bullet (see the image below). There are 2 empty chambers just preceding the bullets out of the six empty chambers. So, your chance of getting killed is  $2/6 = 1/3$ .

So you will prefer not to spin the barrel before the trigger is pulled again!



[Discuss](#) the solution with TestFunda users.



## Puzzle #11: Prachi and Her Flights

Date	Airlines	City	Neighbor
Nov 2	Trump Airlines	NYC	Realtor
Nov 9	Stratus Airlines	Toronto	Fashion Designer
Nov 16	Caesar Airlines	Athens	Choreographer
Nov 23	Einstein Airlines	Berlin	Wrestler
Nov 30	Mussolini Airlines	Rome	Actress

The trip to Athens, the trip where Prachi sat next to the Actress, and the trip where Prachi sat next to the Wrestler were among the last three trips [Nov 16th, 23rd, and 30th], and the trip to Athens wasn't the one where she met the Actress [as per one of the given conditions] or the Wrestler [she flew Trump Airlines exactly two weeks before the one to Athens, and she flew Stratus Airlines exactly two weeks before she sat by the Wrestler] Thus, these three are separate flights, in some order.

She didn't sit by the Fashion Designer on the trip to Athens, so the flight where she sat by the Fashion Designer was on one of the first two flights [Nov 2nd and Nov 9th]. But it wasn't first [as Fashion Designer was in a week after the one in which Prachi traveled by Trump Airlines]. Therefore, Nov 2nd flight was the Trump Airlines flight, the one where she sat by the Fashion Designer was the Nov 9th flight, and the one to Athens was the Nov 16th flight. And she sat by the Actress and Wrestler on the Nov 23rd and Nov 30th flight, in some order.

She didn't sit beside the Choreographer on the Trump Airlines flight, so that wasn't Nov 2nd, she sat beside the Choreographer on Nov 16th

[the Athens flight] and it was the Nov 2nd flight where he sat next to the Realtor. Nov 2nd [first flight, Trump Airlines, Realtor] wasn't to Rome, Berlin, or Toronto, so that flight was to NYC.

The Nov 9th flight wasn't to Rome [as it has to be after the one with Choreographer which was Nov 16th] or to Berlin [after Caesar Airlines, which would have to be Nov 2nd, but Trump Airlines was Nov 2nd], thus, on Nov 9th she flew to Toronto. Berlin wasn't the last destination, so it was her destination on Nov 23rd and Rome was her destination on Nov 30th. Berlin [Nov 23rd] was before the one where she sat by the Actress, so she sat by the Actress on Nov 30th flight to Rome, and it was on the Nov 23rd flight to Berlin that she sat by the Wrestler. Since she sat by the Wrestler on the Nov 23rd flight, then she flew Stratus Airlines on the 9th [exactly two weeks before]. She flew Caesar Airlines before the flight when she flew to Berlin [Nov 23rd] so she flew Caesar Airlines on the 16th. She didn't fly Einstein Airlines to Rome [Nov 30th], thus, she flew Einstein Airlines to Berlin on the 23rd and her last flight that month was on Mussolini Airlines.

[Discuss](#) the solution with TestFunda users.

## Puzzle #12: Sally's Dice

Die 1: R, N, Z, M, O, E

Die 2: I, A, T, B, H, S

Die 3: D, P, C, Y, U, L

Consider the word RID. Each of the letters R, I and D lie on different dice. Similarly, for the word DIN, each of the letters D, I and N lie on different dice. From this it can be deduced that R and N are on the same die.

From ZIP and PAN, we get that P and N and P and I cannot be on the same die. So, P and D are on the same die, A and I are on the same die and Z, R and N are on the same die.

From COT and DOT, C and D are on the same die.

Using TRY and DOT, T happens to be on the same die as I. Also, since the dice that has C and I are known, M is on the same die as R.

Also, since we know the positions of C and T, we can place O on the same die as R. As a result, using BOY, B is placed on the same die as I. And, knowing the positions of B and N, we can place U on the same die as D.

From LET and HEP, H and P cannot be on the same die, so L is on the same die as D, and E is on the same die as R.

The only alphabet that's left is S and that can be placed in the vacant slot on the same die as I.

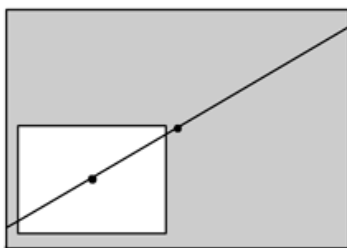
[Discuss](#) the solution with TestFunda users.

## Puzzle #13: Dividing the Inheritance

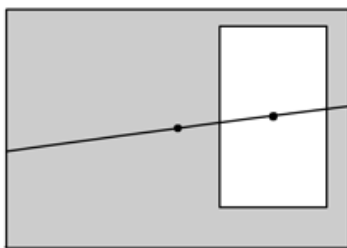
Join the centre of the main plot of land with the centre of the barren piece of land. Extrapolate the line on either side to the edge of the main plot. The plot will get divided equally into 2 equal parts irrespective of the position and orientation of the inner rectangle.

[Discuss](#) the solution with TestFunda users.

Example 1



Example 2



## Puzzle #14: The Voyage of the Monkeys

Let the four humans be A, B, C and D and the four monkeys be a, b, c and d.

Let a be the monkey who can raft.

In order to cross the river safely, a, b and c cross the river first. Then, a comes back, takes d with it, deposits it on the other side and returns back.

Now, a stays behind, and B, C and D cross the river.

Now, we have A, a in Einsteinia and B, b, C, c, D and d in Newtonia.

D and d come back. And A, D and a go to Newtonia leaving b behind.

Later D comes back and takes with him safely to Newtonia.

Thus, in 9 trips, all of them safely cross the river.

[Discuss](#) the solution with TestFunda users.

## Puzzle #15: The Voyage of the Monkeys - Take Two

Let the five jugglers be A, B, C, D, and E and the five monkeys be by a, b, c, d, and e. Let a be the monkey that knows how to raft.

a, b, and c cross the river first.

a comes back alone and takes d over to Edisonia.

a goes back and stays behind.

B, C, and D, now, cross the river. Now A, a, E, and e are in Newtonia while B, b, C, c, D, and d are in Edisonia.

D and d return to Newtonia.

Now, A and a raft to Edisonia.

C and c return to Newtonia.

C, D, and E, from Newtonia, cross over to Edisonia. Now monkeys c, d, and e are at Newtonia, and everyone else is at Edisonia.

a goes back to Newtonia.

It returns to Edisonia with c and d.

It then goes back to Newtonia and fetches e from there.

Thus, in 13 trips all of them safely cross over to Edisonia.

[Discuss](#) the solution with TestFunda users.

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