

## 2005 Mixed Team Competition Answers

1. Berry is the thief, Augusto is the lookout, and Casey is the driver.
2. Are you James?
3. The same question works: Are you James?
4. Is Arthur truthful? Note that Arthur will claim that Arthur is truthful, while Henry will claim that Arthur is not truthful. So if you get a “yes” for an answer, you know that you are speaking to Arthur and if you get a “no” for an answer then you are speaking to Henry.

The question: “Does Arthur lie?” also works

5. Knights & Knaves questions
  - (a) No; nobody can claim to be a knave because no knight would lie and no knave would truthfully admit to being a knave.
  - (b) A is a knight and B is knave.
6. The number in the center square is 11. Adding the numbers in the center row, center column, and both diagonals gives  $4 \times 32 = 133$ . The numbers in this sum are every number in the grid exactly once except for the center square which is counted four times. The sum of all the numbers in the grid is 99 ( $3 \times 33$ ). The number in the center square is  $(132 - 99)/3 = 11$ .
7.
  - (a) On Monday, Kathy won the trip.
  - (b) On Tuesday, Martin won the boat.
  - (c) On Wednesday, Vanda won the cash.
  - (d) On Thursday, Eileen won the car.
  - (e) On Friday, Jordan won the furniture.
8. NO. The group from Venus has an odd number of hands (the sum of 17 odd numbers) and the Varmlanders have an even number of hands. Thus the total number of hands is an odd number but for the dance to be done properly, there should be an even number of hands.

9. Mini-Sudoku puzzle

4	1	6	3	5	2
5	3	2	6	4	1
1	2	5	4	6	3
6	4	3	2	1	5
3	6	1	5	2	4
2	5	4	1	3	6

10. Sudoku

6	4	8	7	1	3	9	5	2
1	5	7	9	2	6	4	8	3
3	2	9	8	4	5	7	6	1
5	9	2	1	6	4	8	3	7
8	6	4	5	3	7	2	1	9
7	1	3	2	8	9	5	4	6
4	7	1	3	5	2	6	9	8
9	3	6	4	7	8	1	2	5
2	8	5	6	9	1	3	7	4

11. The Japanese man owns the zebra and the Norwegian drinks water.