

Solutions and Evaluation Criteria

1 General Knowledge

No:	Correct answer:	Explanation of the scoring:
1.1	c)	1 point for correct selection, 0 points for incorrect selection
1.2	d)	1 point for correct selection, 0 points for incorrect selection
1.3	a)	1 point for correct selection, 0 points for incorrect selection
1.4	d)	1 point for correct selection, 0 points for incorrect selection
1.5	b)	1 point for correct selection, 0 points for incorrect selection
1.6	a)	1 point for correct selection, 0 points for incorrect selection
1.7	c)	1 point for correct selection, 0 points for incorrect selection
1.8	a)	1 point for correct selection, 0 points for incorrect selection
1.9	Rhodesia	2 points for a correct answer, 0 points for an incorrect answer
1.10	Ammonia, NH ₃	2 points for a correct answer, 0 points for an incorrect answer

2 Mathematics and Logical Thinking

2.1 Solution: To find out, we can look at the situation in each minute: In the first minute, he climbs 3 meters up (3 meters). Then he rests for a minute and slides down 2 meters (1 meter). In the third minute, he climbs 3 meters up again (4 meters). Then he rests for another minute and slides 2 meters down (2 meters). In the fifth minute, he climbs up another 3 meters (5 meters). Then he rests for a minute and slides 2 meters down (3 meters). In the seventh minute, he climbs another 3 meters (6 meters). Then he rests for a minute and slides 2 meters down (4 meters). In the ninth minute, he climbs up another 3 meters (7 meters). Then he rests for a minute and slides 2 meters down (5 meters). In the eleventh minute, he climbs another 3 meters (8 meters). Then he rests for a minute and slides 2 meters down (6 meters). In the thirteenth minute, he climbs another 3 meters (9 meters). Then he rests for a minute and slides 2 meters down (7 meters). Finally, in the fifteenth minute, he climbs the last 3 meters (10 meters).

So, after **15 minutes** he is at the top of the rope.

Points are awarded depending on whether the solution was explained (**2 points**) and whether the solution is correct (**2 points**)

2.2 Solution: To find the fastest time, we need to get the cachers through the tunnel efficiently by having the slowest and fastest cachers go together. First, cachers 1 and 2 go through the tunnel together (2 minutes). Then Cachers 1 and 2 go back together (1 minute). Next, cachers 3 and 4 go through the tunnel together (6 minutes). Cachers 3 and 4 go back together (2 minutes). Finally, cachers 1 and 2 go through the tunnel together again (2 minutes). The total time is $2 + 1 + 6 + 2 + 2 = 13$ minutes.

So, the fastest time for all cachers to get through the tunnel is **13 minutes**.

Points are awarded depending on whether the solution has been explained (**4 points**) and whether the solution is correct (**2 points**). There is a more obvious solution that lets the fastest cachers run there and back. You end up with 15 minutes. If this solution is suggested, **2.5 points** can be awarded.

3 Everyday Life and Creativity

3.1 Solution: It is based on a story from Berlin where a man created **an artificial traffic jam on Google Maps** even though the roads were clear. The correct answer is anything that mentions the traffic jam in any way (**3 points**). If a funny and creative alternative answer is given, **1 point** may be awarded.

3.2 Solution: It is about the invention of **QR codes**, this answer can be logically deduced by correctly associating the Go playing field and the game pieces (**3 points**).

3.3 Solution: The abstract pattern of the **periodic table of elements (PSE)** is shown here and the motif is dedicated to the discovery by the scientist Dmitri Mendeleev (**4 points**).

3.4 Solution: A diaper on the beach can be very practical **for storing valuables**. The items wrapped in the diaper are protected from theft, as it looks more like a used diaper and does not arouse any interest among thieves (**4 points**). If a funny and creative alternative answer is given, **2 points** may be awarded.

3.5 Solution: After the cake has been baked and removed from the oven, the protruding piece can be cut off with the object adapted to the round cake tin and **checked for quality and taste without destroying the round shape of the cake (4 points)**.

4 Oral Exam

The leader asks the participant to present the solution to **task 2.2**. It does not matter whether the solution presented is correct or not. If the person is unwilling or unable to present anything, **0 points are awarded**. After the time has elapsed, the presentation ends abruptly. Otherwise, the presentation is scored as follows:

Feature of the presentation:	Explanation of the scoring:
Speech rate	0 - 1 points depending on the flow of speech
Gestures and eye contact	0 - 1 points depending on observation
Clarity of speech	0 - 2 points depending on the observation (accents excluded!)
Reasoning	0 - 3 points depending on the structure and clarity of the argumentation
Quick thinking	0 - 3 points depending on observation and reaction

The results are to be entered manually in a separate Excel sheet after evaluation.