4.2.4 Quiz

Erhöhung eines Lernstilkategorie: Zahlen beziehen sich auf die Liste der Logischen Regeln 4.2.2

Beschreibung der Paths: Die Paths sind aufeinander folgende Zahlen. Die Buchstaben *a* oder *b* stehen entweder für eine richtige Antwort oder für eine falsche Antwort des Lernenden. Beispiel: 2 a verfolgt einen Path mit richtigen Antworten so beziehen sich 3a, 4a,... auf den weiteren Verlauf des Paths mit den korrekten Antworten.

Frage 1: Trick Frage
What day follows the day before yesterday if two days from now will be Sunday? If you want to do it by your own just write the answer otherwise say that you want help or that you don´t know the answer.

Path 1:
Learner Answer: Thursday
Prototyp: That´s right, well done. Let´s move on to the next question.
Regeln: 6, 7, 11

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/I need help, please help me, help..
Prototyp: Do you want a textual explanation or an image as a hint?

Path 2a:
Learner Answer: Image, Picture, show me a picture,...
Prototyp: I will show you an image with the relations. When you are finish type in the answer.

Path 2b:
Learner Answer: textual explanation please, text, description, explain me,...
Prototyp: The key is to realize that "now" must be Friday. Look for the phrase in the problem that tells you something you can work with and use that with another part of the problem to gradually and stepwise lead to a solution. What do you think?

Path 3a.1:
Learner Answer: Thursday
Prototyp: That´s right, well done. You can see that now must be Friday, since two days from Friday is Sunday. The day before yesterday" is Wednesday, and the "day that follows the day before yesterday" is Thursday. Let´s move on to the next question.
Regeln: 1, 8, 11

Path 3a.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong

answer
Prototyp: I will show you an image with the relations. When you are finish type in the answer.

Path 3b.1:
Learner Answer: Thursday
Prototyp: That´s right, well done. Let´s move on to the next question. You can see that now must be Friday, since two days from Friday is Sunday. The day before yesterday" is Wednesday, and the "day that follows the day before yesterday" is Thursday.
Regeln: 3, 8, 11

Path 3b.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: Prototyp: The key is to realize that "now" must be Friday. Look for the phrase in the problem that tells you something you can work with and use that with another part of the problem to gradually and stepwise lead to a solution. What do you think?

Path 4a.2.1:
Learner Answer: Thursday
Prototyp: That´s right, well done. Let´s move on to the next question. You can see that now must be Friday, since two days from Friday is Sunday. The day before yesterday" is Wednesday, and the "day that follows the day before yesterday" is Thursday.
Regeln: 3, 9, 11

Path 4a.2.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/..
Prototyp: Okay I will tell you the answer.
You can see that now must be Friday, since two days from Friday is Sunday. The day before yesterday" is Wednesday, and the "day that follows the day before yesterday" is Thursday. Let´s move on to the next question.

Path 5b.2.1:
Learner Answer: Thursday
Prototyp: That´s right, well done. You can see that now must be Friday, since two days from Friday is Sunday. The day before yesterday" is Wednesday, and the "day that follows the day before yesterday" is Thursday. Let´s move on to the next question.
Regeln: 1, 9, 11

Path 4b.2.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/..
Prototyp: Okay I will tell you the answer.

You can see that now must be Friday, since two days from Friday is Sunday. The day before yesterday" is Wednesday, and the "day that follows the day before yesterday" is Thursday. Let´s move on to the next question.

Frage 2: Praktische Frage
Which fraction is greater: 5/19 or 3/29 ? If you want to do it by your own just write the answer otherwise say that you want help or that you don´t know the answer.

Path 1:
Learner Answer: 5/19
Prototyp: That´s right, well done. Because if you are doing cross multiplication, 5/19 will have 145 by calculating 5*29 and 3/29 will have 57 by calculating 29*5. Finally 145 is greater than 57 therefore 5/19 is bigger than 3/29.
Regeln: 6, 7, 11

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/I need help, please help me, help, wrong answer..
Prototyp: Do you want a textual explanation, a video or an example as a hint?

Path 2a:
Learner Answer: Video, Movie, show me a video, movie, clip,...
Prototyp: I will show you a video with with an explanation: `https://www.youtube.com/watch?v=KNdUJQ_qd4U`. When you are finish type in the answer.

Path 2b:
Learner Answer: textual explanation please, text, description, explain me,...
Prototyp: Look here: `https://www.mathsisfun.com/comparing-fractions.html`. When you are finish type in the answer.

Path 2c:
Learner Answer: example
Prototyp: If you have the fractions 1/2 and 3/4. In decimal 1/2 is 0.5 and 3/4 is 0.75. Otherwise you can get the higher fraction by cross-multiplication. If you multiplicate the denominator from the first term with the numerator from the seconde term you calculate: 2*4 = 6. Therefore the second term has the number 6. For the other term you calculate 4*1 = 4. Therefore the first term has the number 4. 6 is higher than 4. Finally the second term is greater than the first term. What do you think which term is greater: 2/17 or 3/34?

Path 3a.1:
Learner Answer: 5/19
Prototyp: That´s right, well done. Because if you are doing cross multiplication, 5/19 will have 145 by calculating 5*29 and 3/29 will have 57 by calculating 29*5. Finally 145 is greater than 57 therefore 5/19 is bigger than 3/29.
Regeln: 2, 8, 11

Path 3a.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: other choice or should the user gets the answer?

Path 3b.1:
Learner Answer: 5/19
Prototyp: That´s right, well done. Because if you are doing cross multiplication, 5/19 will have 145 by calculating 5*29 and 3/29 will have 57 by calculating 29*5. Finally 145 is greater than 57 therefore 5/19 is bigger than 3/29.
Regeln: 1, 8, 11

Path 3b.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: other choice or should the user gets the answer?

Path 3c.1:
Learner Answer: 5/19
Prototyp: That´s right, well done. Because if you are doing cross multiplication, 5/19 will have 145 by calculating 5*29 and 3/29 will have 57 by calculating 29*5. Finally 145 is greater than 57 therefore 5/19 is bigger than 3/29.
Regeln: 4, 8, 11answer.

Path 3c.2:
Learner Answer: Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: other choice or should the user gets the answer?

Frage 3: Praktische Frage
In the following subtraction problem, each letter uniquely represents one digit from 0 to 9. At least one digit is not 0. Find the values of A, B, and C.
A B A
- C A

−−−−−−
/ A B

Path 1:
Learner Answer: A = 1 and B = 0
Prototyp: That´s right, well done. The only way A and B can be integers is if C = 9.
Regeln: 6, 7, 11

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/I need help, please help me, help, wrong answer..
Prototyp: Do you want a textual explanation or a video as a hint?

Path 2a:
Learner Answer: Video, Movie, show me a video, movie, clip,...
Prototyp: I will show you a video with instead of a subtraction an addition. Try to translate the knowledge from the addition to the subtraction `https://www.youtube.com/watch?v=iI0yzWncjH4`. When you are finish type in the answer.

Path 2b:
Learner Answer: textual explanation please, text, description, explain me,...
Prototyp: Try to set for each letter the biggest uniquely number between 0 and 9 and calculate the subtraction. As a result you should get 910. Do you?

Path 3a.1:
Learner Answer: A = 1 and B = 0 and C = 9
Prototyp: That´s right, well done. The only way A and B can be integers is if C = 9.
Regeln: 2, 8, 11

Path 3a.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: Okay I will give you a textual explanation.

Path 3b.1:
Learner Answer: Yes, of course,...
Prototyp: That´s right, well done. If you put for A = 9, B = 8 and C = 7 you have to calculate 989 - 79 = 910. Try to figure out what will be the numbers A, B or C.
Regeln: 1, 8, 11

Path 3b.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: If you put for A = 9, B = 8 and C = 7 you get have to calculate 989 - 79 = 910. Try to figure out what will be the numbers A, B or C.

Path 3b.1.1:
Learner Answer: A = 1 and B = 0 and C = 9
Prototyp: That´s right, well done. FYou got from the calculation 910, the result from the subtraction problem is A B. Therefore the single digit A = 1 and B= 0. If you put for A = 1

and B = 0 in the subtraction problem you get: 101 - C1 = 10. Now you have to put instead of C a 9. Finally you get 101 - 91 = 10.
Regeln: 1, 8, 11

Path 3b.1.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: You got from the calculation 910, the result from the subtraction problem is A B. Therefore the single digit A = 1 and B= 0. If you put for A = 1 and B = 0 in the subtraction problem you get: 101 - C1 = 10. Now you have to put instead of C a 9. Finally you get 101 - 91 = 10.

Frage 4: Praktische Frage Prozess Typ
You are given numbers that connect in some way. They connect along the row, but there is also a relationship with the numbers that are above or below each other. Sometimes a number is missing and a space mark, or line (–) has been put in its place. One of the numbers has been replaced by a question mark (?). From the information given, you have to find the number that would replace the question mark.

1 _ 9 ?
2 6 _ 54

If you want to do it by your own just write the answer otherwise say that you want help or that you don´t know the answer.

Path 1:
Learner Answer: 27
Prototyp: That´s right, well done. The numbers in the lower line are always twice the number in the row above therefore it has to be 27. Let´s move on.
Regeln: 6, 7, 11

Weitere Fragestellung: Path 1a:
Prototyp: Can you see a other relationship with the numbers when you add a 3 to the higher line and 27 for the question mark and a 18 to the lower line.
Learner Answer: from left to right each number is multiplied three times
Prototyp: That´s right, well done. So 1 * 3 = 3, 3 * 3 = 9 and 9 * 3 is 27. 2 * 3 = 6, 6 * 3 = 18 and 18 * 3 = 54.
Regeln: 6, 7, 11

Weitere Fragestellung: Path 1b:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong

answer
Prototyp: From left to right each number is multiplied three times. So 1 * 3 = 3, 3 * 3 = 9 and 9 * 3 is 27. 2 * 3 = 6, 6 * 3 = 18 and 18 * 3 = 54.

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/I need help, please help me, help..
Prototyp: Can you figure out any relationship between the lower line and the higher line? Tell me.

Path 2a:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong Number
Prototyp: I will give you some dummy numbers as an example. Add to the higher line a 3 and to the lower line 18. Can you tell me now a Relationship?

Path 2b:
Learner Answer: each number is double, twice, multiplied two times.
Prototyp: That´s right. Which number would replace the question mark?
Regeln: 1, 8, 11

Path 3a.1:
Learner Answer: each number is double, twice, multiplied two times.
Prototyp: That´s right. Which number would replace the question mark?
Regeln: 4, 9, 11

Path 3a.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: The numbers in the lower line are always twice the number in the row above therefore it has to be 27. Let´s move on.

Path 3b:
Learner Answer: 27
Prototyp: That´s right, well done. The numbers in the lower line are always twice the number in the row above therefore it has to be 27. Let´s move on.
Regeln: 6, 8, 11

Weitere Fragestellung: 4
Add to the higher line a 3 and to the lower line 18. Can you tell me now a other Relationship?

Path 4a:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong

answer
Prototyp: From left to right each number is multiplied three times. So 1 * 3 = 3, 3 * 3 = 9 and 9 * 3 is 27. 2 * 3 = 6, 6 * 3 = 18 and 18 * 3 = 54.

Path 4b:
Learner Answer: from left to right each number is multiplied three times
Prototyp: That´s right, well done. So 1 * 3 = 3, 3 * 3 = 9 and 9 * 3 is 27. 2 * 3 = 6, 6 * 3 = 18 and 18 * 3 = 54.
Regeln: 6, 8, 11

Frage 5: Praktische Frage: Prozess Typ

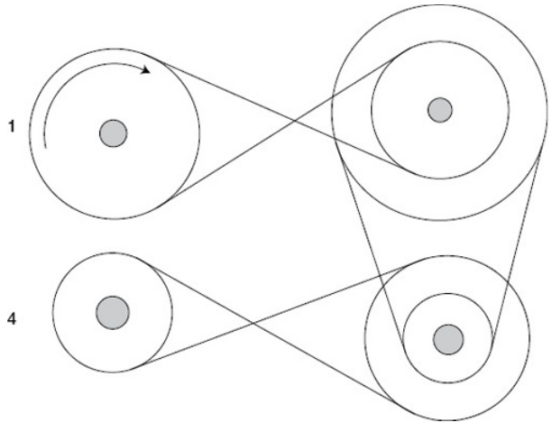

Abbildung 4.1: QuizFrage

When wheel 1 turns clockwise, which way does wheel 4 turn? If you want to do it by your own just write the answer otherwise say that you want help or that you don´t know the answer.

Path 1:
Learner Answer: clockwise/ right
Prototyp: That´s right, well done.
After wheel 1, the second wheel turns in the opposite direction, because the band connecting the two wheels has been crossed.The third wheel moves in the same direction as wheel 2, because the bands go the same way around both wheels. As the bands arecrossed between wheels 3 and 4, wheel 4 will turn in the oppositedirection to wheel 3, therefore clockwise.
Regeln: 6, 7, 11

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/I need help, please help me, help..
Prototyp: Lets do it step by step. In which direction will wheel 2 turn?

Path 2a:
Learner Answer: anticlockwise/ left / opposite direction
Prototyp: That´s right, well done. The second wheel turns in the opposite direction,because the band connecting the two wheels has been crossed.

Path 2b:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer

Prototyp: The second wheel turns in the opposite direction,because the band connecting the two wheels has been crossed.

Path 3a:
Prototyp: Let´s get back to the mainquestion. In which direction will wheel 4 turn?
Learner Answer: clockwise/ right
Prototyp: That´s right, well done.
The third wheel moves in the same direction as wheel 2, because the bands go the same way around both wheels. As the bands are crossed between wheels 3 and 4, wheel 4 will turn in the opposite direction to wheel 3, therefore clockwise.
Regeln: 1, 8, 11

Path 3b:
Prototyp: In which direction will wheel 3 turn?
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: The third wheel moves in the same direction as wheel 2, because the bands go the same way around both wheels.

Path 4:
In which direction will wheel 4 turn?

Path 4a:
Learner Answer: clockwise/ right
Prototyp: That´s right, well done.
The third wheel moves in the same direction as wheel 2, because the bands go the same way around both wheels. As the bands are crossed between wheels 3 and 4, wheel 4 will turn in the opposite direction to wheel 3, therefore clockwise.
Regel: 1, 9 ,11

Path 4b:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: I will show you an image with the relations. When you are finish type in the answer.

Path 5b.1:
Learner Answer: clockwise/ right
Prototyp: That´s right, well done.
The third wheel moves in the same direction as wheel 2, because the bands go the same way around both wheels. As the bands are crossed between wheels 3 and 4, wheel 4 will turn in the opposite direction to wheel 3, therefore clockwise.
Regel: 3, 9, 11

Path 5b.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: As the bands are crossed between wheels 3 and 4, wheel 4 will turn in the opposite direction to wheel 3, therefore clockwise.

Frage 6 Praktische Frage Prozess Typ:
Find out whether a pair of numbers matches any of the possible answerpairs. One of the pairs sometimes has a relationship with one of the four possible answers. Which from the following numbers have a relationship with: **9:3**
1:4, 2:7, 3:2, 1:3

Path 1:
Learner Answer: 1:3
Prototyp: That´s right, well done. 1 * 3 = 3 and 3 * 3 is 9.
Regeln: 6,7, 11

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: Let´s do it step by step. What is the result if you divide 9 through 3 ?

Path 2a:
Learner Answer: 3
Prototyp: That´s right, well done. Do you know which number from the opportunities is right?
Regel: 4

Path 2b:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: I will show you an image with a description. When you are finish type in the answer.

Path 3a.1:
Learner Answer: 1:3
Prototyp: That´s right, well done. 1 * 3 = 3 and 3 * 3 is 9.
Regeln: 8, 11

Path 3a.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: It should be 3:1 or 3:2. Do you see any relation from one of these numbers with 9:3 ?

Path 3b.1:
Learner Answer: 3
Prototyp: That´s right. What do you think which numbers of 3:2 and 1:3 could have a relation to 9:3?
Regel: 3

Path 3b.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: It´s 3. What do you think which numbers of 3:2 and 1:3 could have a relation to 9:3?

Path 4a.2.1:
Learner Answer: 1:3
Prototyp: That´s right, well done. 1 * 3 = 3 and 3 * 3 is 9.
Regeln: 4, 9 , 11

Path 4a.2.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: It´s 1:3 because 1 * 3 = 3 and 3 * 3 is 9.

Path 4b.1.1 & Path 4b.2.1:
Learner Answer: 1:3
Prototyp: Yes, it´s 1:3 because 1 * 3 = 3 and 3 * 3 is 9. Well done!
Regeln: 4, 9, 11

Path 4b.1.2 & Path 4b.2.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: It´s 1:3 because 1 * 3 = 3 and 3 * 3 is 9.

Frage 7 Praktische Frage Prozess Typ:
In miles per hour, what is the average rate of a car going 20 mph and traveling back the same distance at 60 mph?
If you want to do it by your own just write the answer otherwise say that you want help or that you don´t know the answer.

Path 1:
Learner Answer: 30
Prototyp: That´s right, well done. The Average rate = Total distance/Total time. Where a and b are the two rates, the average rate can be shown to be ab/(a + b). To get the way there and back you have to multiplicate the total distance with 2. So 2(20)(60)/(20 + 60) = 30.
Regeln: 6,7, 11

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/I need help, please help me, help..
Prototyp: Let´s do it step by step. First of all the Average rate = Total distance/Total time. Let's say the distance is D one way. Then the total distance is 2D. Can you now figure out what the average rate is?

Path 2a:
Learner Answer: 30
Prototyp: That´s right, well done. The Average rate = Total distance/Total time. Where a and b are the two rates, the average rate can be shown to be ab/(a + b). To get the way there and back you have to multiplicate the total distance with 2. So 2(20)(60)/(20 + 60) = 30.
Regeln: 1,8, 11

Path 2b:
Learner Answer:: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: What do you think is the total time?

Path 3b.1:
Learner Answer: 20+60, 80
Prototyp: That´s right, well done. Do you know what the total distance is?
Regeln: 1,9

Path 3b.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: The Total Time is 20 + 60 = 80. Average rate = Total distance/80. Do you know what the Total distance is?

Path 4b.1.1:
Learner Answer: 2*60*20, 2400
Prototyp: One Way is 60*20. To get there and back. You have to calculate 2*60*20 = 2400. What will be the average rate?
Regeln: 1,9,11

Path 4b.1.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: I will show you an image with the relations. When you are finish type in the answer.

Path 4b.2.1:
Learner Answer: 2*60*20, 2400
Prototyp: One Way is 60*20. To get there and back. You have to calculate 2*60*20 = 2400. What will be the average rate?
Regeln: 1,9,11

Path 4b.2.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: I will show you an image with the relations. When you are finish type in the answer.

Path 5b.1.1.1:
Learner Answer: 2*60*20, 2400
Prototyp: One Way is 60*20. To get there and back. You have to calculate 2*60*20 = 2400. What will be the average rate?
Regeln: 3,9,11

Path 5b.1.1.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: One Way is 60*20. To get there and back. You have to calculate 2*60*20 = 2400. What will be the average rate?

Path 5b.1.2.1:
Learner Answer: 30
Prototyp: Yes that´s right. Now the Average rate = 2400/80. Therefore the Average Rate is 30.
Regel: 11

Path 5b.1.2.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: Now the Average rate = 2400/80. Therefore the Average Rate is 30.

Path 5b.2.2.1:
Learner Answer: 2*60*20, 2400
Prototyp: One Way is 60*20. To get there and back. You have to calculate 2*60*20 = 2400. What will be the average rate?
Regeln: 3,9,11

Path 5b.2.2.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: One Way is 60*20. To get there and back. You have to calculate 2*60*20 = 2400. What will be the average rate?

Path 5b.1.2.1.1:
Learner Answer: 30
Prototyp: Yes that´s right. Now the Average rate = 2400/80. Therefore the Average Rate is 30.
Regel: 11

Path 5b.1.2.1.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: Now the Average rate = 2400/80. Therefore the Average Rate is 30.

Path 5b.2.1.1.1:
Learner Answer: 30
Prototyp: Yes that´s right. Now the Average rate = 2400/80. Therefore the Average Rate is 30.
Regel: 11

Path 5b.2.1.1.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: Now the Average rate = 2400/80. Therefore the Average Rate is 30.

Path 5b.2.2.1.1:
Learner Answer: 30
Prototyp: Yes that´s right. Now the Average rate = 2400/80. Therefore the Average Rate is 30.
Regel: 11

Path 5b.2.2.1.2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: Now the Average rate = 2400/80. Therefore the Average Rate is 30.

Frage 8: Theoretische Frage Trick Typ
Jane, Rachel and Tessa are girls who are wearing a jacket, coat or skirt in blue, green or red. None of these articles of clothing is the same colour and each girl is wearing a different colour. The coat belonging to Tessa is not green. Rachel's jacket and Jane's skirt are the same colour. Tessa's skirt is red. Her jacket, Rachel's skirt and Jane's coat are all the same colour. What colour is Tessa's coat?

Path 1:
Learner Answer: blue
Regel: 10, 11

Path 2:
Learner Answer: No/ don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: It´s the color blue. None of these articles of clothing is the same colour. The coat belonging to Tessa is not green. Tessa's skirt is red. So it has to be the color blue because the clothes are just in blue, green or red available and Tessa´s coat is not green and her skirt is red.
Regel: 10

Frage 9 Praktische Frage Prozess Typ:
What is the next number in the following sequence: 0 0 1 2 2 4 3 6 4 8 5 ?

Path 1:
Learner Answer: 10
That´s right, well done. There are two alternating sequences: 0, 1, 2, 3, 4, 5 and 0, 2, 4, 6, 8
Regeln: 6, 7, 11

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: Look at the first, third, fifth and also at the second, fourth and sixth number. Which relation do you can see?

Path 2a:
Learner Answer: each number is double, an increment of 2
Prototyp: That´s right, well done. There are two alternating sequences: 0, 1, 2, 3, 4, 5 and 0, 2, 4, 6, 8.
Regeln: 1, 8

Path 2b:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: There are two alternating sequences: 0, 1, 2, 3, 4, 5 and 0, 2, 4, 6, 8.

Path 3:
Which is the missing number?

Path 3a:
Learner Answer::10
Prototyp: That´s right, well done. The missing Number is 10 because after the 8 plus an increment of 2 is 10.
Regel: 11

Path 3b:
Learner Answer:10
Prototyp: That´s right, well done. The missing Number is 10 because after the 8 plus an increment of 2 is 10.
Regeln: 1,9,11

Path 3c:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong

answer
Prototyp: I will show you an image with the relations. When you are finish type in the answer.

Path 4c.1:
Learner Answer::10
Prototyp: That´s right, well done. The missing Number is 10 because after the 8 plus an increment of 2 is 10.
Regeln: 3,9,11

Path 4c.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: The missing Number is 10 because after the 8 plus an increment of 2 is 10.

Frage 10 Praktische Frage:
What is the Mean, Median and Mode of the following numbers: 7+7+14+10+10+3+7+14

Path 1:
Learner Answer: Mean = 9, Median = 8,5 , Mode = 7
That´s right, well done. The Mean is 9 because if calculate 7+7+14+10+10+3+7+14 = 72. 72 divided by 8 which represents numbers of integers, than you get 9. For the Median you get the numbers 3,7,7,7,10,10,14,14, Now you have to calculate the numbers in the middle by addition. Therefore (7 + 10) / 2 = 8.5. The Mode represents the most frequent number. You have 3 times 7 in the line of numbers. Finally the Mode is 7.
Regeln: 6, 7, 11

Path 2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/I need help, please help me, help, wrong answer..
Prototyp: Do you want a textual explanation, a video or an example as a hint?

Path 2a:
Learner Answer: Video, Movie, show me a video, movie, clip,...
Prototyp: I will show you a video with with an explanation: `https://www.youtube.com/watch?v=B1HEzNTGeZ4`. When you are finish what is the Mean, Median and Mode of the following numbers: 7+7+14+10+10+3+7+14

Path 2b:
Learner Answer: textual explanation please, text, description, explain me,...
Prototyp: For the mean you have to add all the numbers. After that you divide it by how many numbers you got. For the Median you put the numbers in order from least to greatest. If you have a uneven dataset just take the number in the middle for the Median. Otherwise if you got an even dataset. After ordering the numbers take the numbers in the middle and add them. After that you have to divide the result by two. Afterwards you got your Median. The Mode shows the most often number in the dataset. What is the Mean, Median and Mode of the following numbers: 7+7+14+10+10+3+7+14

Path 2c:
Learner Answer: example
Prototyp: Dataset: 2,2,3,4.
Mean: First you add all numbers: 2+4+3+2 = 11. After that you divide the result by how many numbers you got: 11 / 4 = 2.75
Median: order the items: 2,2,3,4. Get the two numbers in the middle: 2+3 and divide them by 2. You get 2.5 as a result.
Mode: indicates the most often number. The number 2 occurs two times. Therefore the number

two is the Mode.
What is the Mean, Median and Mode of the following numbers: 7+7+14+10+10+3+7+14

Path 3a.1:
Learner Answer: Mean = 9, Median = 8,5 , Mode = 7
That´s right, well done. The Mean is 9 because if calculate 7+7+14+10+10+3+7+14 = 72. 72 divided by 8 which represents numbers of integers, than you get 9. For the Median you get the numbers 3,7,7,7,10,10,14,14, Now you have to calculate the numbers in the middle by addition. Therefore (7 + 10) / 2 = 8.5. The Mode represents the most frequent number. You have 3 times 7 in the line of numbers. Finally the Mode is 7.
Regeln: 2, 8, 11

Path 3a.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: other choice or should the user gets the answer?

Path 3b.1:
Learner Answer: Mean = 9, Median = 8,5 , Mode = 7
That´s right, well done. The Mean is 9 because if calculate 7+7+14+10+10+3+7+14 = 72. 72 divided by 8 which represents numbers of integers, than you get 9. For the Median you get the numbers 3,7,7,7,10,10,14,14, Now you have to calculate the numbers in the middle by addition. Therefore (7 + 10) / 2 = 8.5. The Mode represents the most frequent number. You have 3 times 7 in the line of numbers. Finally the Mode is 7.
Finally 68 is greater than 51 therefore 2/17 is bigger than 3/34.
Regeln: 1, 8, 11

Path 3b.2:
Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: other choice or should the user gets the answer?

Path 3c.1:
Learner Answer: Mean = 9, Median = 8,5 , Mode = 7
That´s right, well done. The Mean is 9 because if calculate 7+7+14+10+10+3+7+14 = 72. 72 divided by 8 which represents numbers of integers, than you get 9. For the Median you get the numbers 3,7,7,7,10,10,14,14, Now you have to calculate the numbers in the middle by addition. Therefore (7 + 10) / 2 = 8.5. The Mode represents the most frequent number. You have 3 times 7 in the line of numbers. Finally the Mode is 7.
Regeln: 4, 8, 11answer.

Path 3c.2:
Learner Answer: Learner Answer: No / don´t know/ what do you mean/ what do you want from me/ wrong answer
Prototyp: other choice or should the user gets the answer?