Inductive and Deductive Reasoning — Practice Test

Saskatchewan Foundations of Mathematics 20 • 25 questions

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The statement: If it rains, then the ground is wet. Its converse is**

- **A** if the ground is wet, then it rains
- **B** if it does not rain, then the ground is not wet
- **C** if the ground is not wet, then it does not rain
- **D** it rains and the ground is wet

Understand It with Pulse | Flag a mistake

2 **Inductive reasoning moves from**

A a general rule to a specific case

B specific examples to a general conclusion

C a conclusion to its premises

D a definition to an example

Understand It with Pulse | Flag a mistake

3 **A pattern begins 5, 9, 13. The term in position 8 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The statement: If it rains, then the ground is wet. Its contrapositive is**

- **A** if the ground is wet, then it rains
- **B** if it does not rain, then the ground is not wet
- **C** if the ground is not wet, then it does not rain
- **D** it rains and the ground is not wet

Understand It with Pulse | Flag a mistake

5 **The claim that every even number is divisible by 4 is false. A counterexample is**

- **A** 8
- **B** 12
- **C** 20
- **D** 6

Understand It with Pulse | Flag a mistake

6 **A pattern begins 3, 6, 12. The term in position 5 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A pattern begins 4, 6, 8. The term in position 8 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **Deductive reasoning moves from**

A a general rule to a specific case

B specific examples to a general conclusion

C a conclusion to its premises

D a definition to an example

Understand It with Pulse | Flag a mistake

9 **The statement: If a shape is a square, then it has four sides. Its inverse is**

- **A** if a shape is not a square, then it does not have four sides
- **B** if a shape has four sides, then it is a square
- **C** if a shape does not have four sides, then it is not a square
- **D** a shape is a square and has four sides

Understand It with Pulse | Flag a mistake

10 **The claim that every prime number is odd is false. A counterexample is**

- **A** 2
- **B** 3
- **C** 5
- **D** 7

Understand It with Pulse | Flag a mistake

11 **A counterexample to the claim that all multiples of 3 are odd is**

- **A** 6
- **B** 9
- **C** 15
- **D** 21

Understand It with Pulse | Flag a mistake

12 **The sequence 2, 5, 8, 11 continues by adding 3 each time. The term after 11 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A student notices that 1, 4, 9, 16 are squares. The next square number after 16 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **All multiples of 10 end in 0. The number 350 is a multiple of 10. By deductive reasoning, 350**

A ends in 0

B ends in 5

C is odd

D is prime

Understand It with Pulse | Flag a mistake

15 **A student measures the angles of three triangles and finds each sums to 180 degrees. By inductive reasoning, the student concludes that**

A all triangles have angles summing to 180 degrees

B one triangle has angles summing to 180 degrees

C angles do not exist

D triangles have four sides

Understand It with Pulse | Flag a mistake

16 **The statement: If it is a bird, then it can fly. Its converse is**

A if it can fly, then it is a bird

B if it is not a bird, then it cannot fly

C if it cannot fly, then it is not a bird

D it is a bird and it can fly

Understand It with Pulse | Flag a mistake

17 **The statement: If a number is divisible by 4, then it is even. Its contrapositive is**

A if a number is even, then it is divisible by 4

B if a number is not divisible by 4, then it is not even

C if a number is not even, then it is not divisible by 4

D a number is divisible by 4 and even

Understand It with Pulse | Flag a mistake

18 **Which of the following is an example of inductive reasoning**

A measuring many leaves and guessing a pattern

B using a proven theorem to find an angle

C applying a formula to one case

D reading a definition

Understand It with Pulse | Flag a mistake

19 **The number of tiles is: Figure 1 has 3 tiles, Figure 2 has 5, and Figure 3 has 7. Figure 4 has**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **In the pattern 1, 2, 4, 7, 11, the next term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A pattern of dots has 1 dot in row 1, 3 dots in row 2, and 5 dots in row 3. Row 4 has**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **The claim that every quadrilateral has four equal sides is false. A counterexample is a**

A rectangle that is not a square

B square

C regular pentagon

D triangle

Understand It with Pulse | Flag a mistake

23 **If all squares are rectangles, and a shape is a square, then the shape is a**

A rectangle

B triangle

C circle

D pentagon

Understand It with Pulse | Flag a mistake

24 **A sequence is formed by multiplying by 2 and subtracting 1: 3, 5, 9, 17. The next term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **Which statement is the contrapositive of: If it snows, then school is closed**

A If school is closed, then it snows

B If it does not snow, then school is not closed

C If school is not closed, then it did not snow

D It snows and school is closed

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	A	**10.**	A	**19.**	9
2.	B	**11.**	A	**20.**	16
3.	33	**12.**	14	**21.**	7
4.	C	**13.**	25	**22.**	A
5.	D	**14.**	A	**23.**	A
6.	48	**15.**	A	**24.**	33
7.	18	**16.**	A	**25.**	C
8.	A	**17.**	C		
9.	A	**18.**	A		

© 2026 Brett Robbins. All Rights Reserved.