NOVA SCOTIA MATHEMATICS 11 · UNIT C

Logical Reasoning — Practice Test

Nova Scotia Mathematics 11 • 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 **A pattern starts 2, 5, 8, 11. It is found by adding 3 each time. If the 4th term is 11, the 5th term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A set has 20 members. 6 members are in set A only and the rest are not in A. The number not in A is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **An arithmetic pattern starts at 3 and adds 4 each time. Term number 5 is**

ANSWER _____

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4 **A claim that all prime numbers are odd is disproved by which example?**

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

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5 **A counterexample is used to show that a claim is**

- A True
- B Unclear
- C Long
- D False

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6 **A necessary condition for passing is attending class. Attending class alone**

A Is unrelated

B Guarantees passing

C Does not guarantee passing

D Prevents passing

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7 **A statement and its converse have the same truth value**

A Not always

B Always

C Never

D Only for true statements

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8 **A sufficient condition for a shape to be a rectangle is being a square. A square is**

- A Always a circle
- B Never a rectangle
- C Sometimes a triangle
- D Always a rectangle

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9 **A Venn diagram shows overlap between two sets. The overlap represents the**

- A Union
- B Complement
- C Intersection
- D Subset

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10 **After seeing three white swans, a person concludes all swans are white. This reasoning is**

- A Inductive
- B Deductive
- C Contrapositive
- D Converse

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11 **All cats are animals. Whiskers is a cat. Therefore Whiskers is an animal. This reasoning is**

- A Inductive
- B Circular
- C Random
- D Deductive

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12 **Deductive reasoning moves from**

A General to specific

B Specific to general

C False to true

D True to false

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13 **If a number is divisible by 6, then it is divisible by 3. This is**

A Circular

B True by divisibility

C False

D Unproven

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14 **If a number is even, then it is divisible by 2. The contrapositive is**

- **A** If a number is divisible by 2, then it is even
- **B** If a number is not divisible by 2, then it is not even
- **C** If a number is not even, then it is not divisible by 2
- **D** A number is even and divisible by 2

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15 **If a shape is a square, then it has four sides. The inverse is**

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

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16 **If a student studies, then the student passes. A student passes. Can we conclude the student studied?**

- A No, other reasons are possible
- B Yes, always
- C No, passing is impossible
- D Yes, by converse

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17 **If it rains, then the ground is wet. The converse of this statement 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

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18 **In a group of 12 students, 5 play soccer and 4 play both soccer and hockey. The number who play soccer only is**

ANSWER _____

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19 **Out of 100 people surveyed, 25 chose option A. The number who did not choose A is**

ANSWER _____

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20 **A pattern starts 2, 5, 8, 11. It is found by adding 3 each time. If the 4th term is 11, the 5th term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A set has 25 members. 9 members are in set A only and the rest are not in A. The number not in A is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **An arithmetic pattern starts at 5 and adds 3 each time. Term number 6 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A pattern starts 2, 5, 8, 11. It is found by adding 3 each time. If the 4th term is 11, the 5th term is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A set has 18 members. 5 members are in set A only and the rest are not in A. The number not in A is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **An arithmetic pattern starts at 10 and adds 5 each time. Term number 4 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 14
2. 14
3. 19
4. B
5. D
6. C
7. A
8. D
9. C
10. A
11. D
12. A
13. B
14. B
15. C
16. A
17. A
18. 1
19. 75
20. 14
21. 16
22. 20
23. 14
24. 13
25. 25

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