BRITISH COLUMBIA FOUNDATIONS OF MATHEMATICS 11 (MFOM-11) · UNIT A · 25 QUESTIONS

Mathematical Reasoning and Angle Relationships — Practice Test

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 next term in the pattern 2, 6, 12, 20, 30 is**

- A 36
- B 40
- C 42
- D 48

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2 **A student notices that 3 + 5 = 8, 7 + 11 = 18, and 13 + 17 = 30. The reasoning used to suggest that the sum of two odd numbers is even is**

- A inductive reasoning
- B deductive reasoning
- C a proof by contradiction
- D a circular argument

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3 **Which value is a counterexample to the claim that every prime number is odd?**

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

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4 **Which value is a counterexample to the claim that the square of a number is greater than the number?**

- **A** 3
- **B** 2
- **C** 1
- **D** $\frac{1}{2}$

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5 **The complement of an angle measuring 37° is**

- **A** 143°
- **B** 53°
- **C** 63°
- **D** 37°

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6 **The supplement of an angle measuring 112° is**

A 68°

B 78°

C 112°

D 22°

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7 **Two vertical angles measure 4x - 8 and 2x + 22. The value of x is _____.**



ANSWER

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8 **Two parallel lines are cut by a transversal. One angle measures 72°. The measure of its corresponding angle is**



A 18°

B 108°

C 72°

D 144°

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9 **Two parallel lines are cut by a transversal. One interior angle on the same side measures 118°. The other interior angle on that side measures**

- A 118°
- B 62°
- C 28°
- D 180°

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10 **In a triangle, two angles measure 48° and 73°. The third angle measures**

- A 59°
- B 69°
- C 49°
- D 121°

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11 **In triangle ABC, angle A measures 42° and angle B measures 81°. Angle C measures**



A 57°

B 67°

C 47°

D 123°

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12 **The vertex angle of an isosceles triangle measures 40°. Each base angle measures**

- A 40°
- B 70°
- C 100°
- D 140°

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13 **An exterior angle of a triangle has remote interior angles measuring 55° and 68°. The exterior angle measures**

- A 123°
- B 113°
- C 57°
- D 180°

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14 The sum of the interior angles of a pentagon is

- A 360°
- B 540°
- C 720°
- D 900°

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15 Each interior angle of a regular hexagon measures

- A 108°
- B 120°
- C 135°
- D 150°

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16 **The sum of the exterior angles of any convex polygon, one at each vertex, is**

A 180°

B 270°

C 360°

D 540°

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17 **A central angle subtends an arc of 84°. An inscribed angle subtending the same arc measures**



A 168°

B 84°

C 42°

D 21°

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18 **An inscribed angle measures 35°. The arc it subtends measures**

A 35°

B 70°

C 17.5°

D 105°

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19 **The contrapositive of the statement If it rains, then the ground is wet is**



A If the ground is not wet, then it does not rain

B If the ground is wet, then it rains

C If it does not rain, then the ground is not wet

D If it rains, then the ground is not wet

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20 **The next term in the pattern 1, 1, 2, 3, 5, 8 is**



A 11

B 12

C 13

D 16

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21 **Which shape is a counterexample to the claim that every quadrilateral has four equal sides?**

- A a rectangle that is not a square
- B a square
- C a rhombus
- D an equilateral triangle

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22 **In right triangle ABC, with the right angle at A, angle B measures 34°. Angle C measures**

- A 34°
- B 46°
- C 56°
- D 124°

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23 **Three angles of a quadrilateral measure 95°, 85°, and 110°. The fourth angle measures**

- A 70°
- B 80°
- C 60°
- D 90°

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24 **A student argues: If a number is divisible by 6, then it is even. The number 14 is even, so it is divisible by 6. This argument is**

- A valid, by deductive reasoning
- B invalid, because it affirms the consequent
- C valid, by inductive reasoning
- D invalid, because 14 is prime

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25 **Which conjecture is true?**

A The sum of two consecutive integers is always even

B The sum of two even integers is always even

C The product of two odd integers is always even

D The difference of two odd integers is always odd

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ANSWER KEY

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

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