SET THEORY AND CONDITIONAL STATEMENTS - PRACTICE TEST | NEW BRUNSWICK FOUNDATIONS OF MATHEMATICS 120 · UNIT B · 25 QUESTIONS

Set Theory and Conditional Statements — 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 **A set with 3 elements has this many subsets**

ANSWER _____

Understand It with Pulse | Flag a mistake

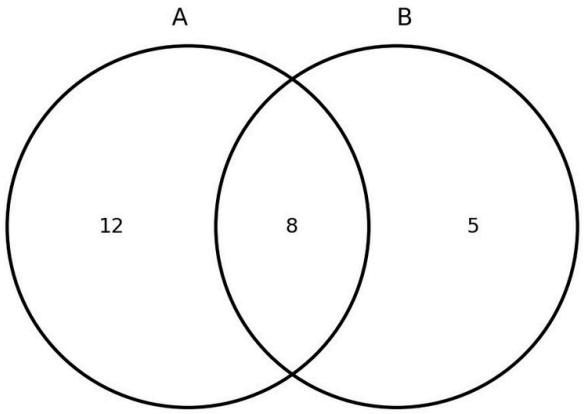
2 **A universal set has 50 elements and set A has 30 elements. The number of elements in the complement of A is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3

In a Venn diagram, 12 elements are in set A only, 8 are in both sets, and 5 are in set B only. The number of elements in set A is



Question 3

In a Venn diagram, 12 elements are in set A only, 8 are in both sets, and 5 are in set B only. The number of elements in set A is

ANSWER

Understand It with Pulse | Flag a mistake

4

In a Venn diagram, 20 elements are in set A only, 10 are in both sets, and 6 are in set B only. The number of elements in the union of A and B is

Question 4

In a Venn diagram, 20 elements are in set A only, 10 are in both sets, and 6 are in set B only. The number of elements in the union of A and B is

ANSWER

Understand It with Pulse | Flag a mistake

5 **Set A has 20 elements and set B has 13 elements, with 8 elements in both. The number in A or B is**

ANSWER

Understand It with Pulse | Flag a mistake

6 **The contrapositive of the statement if a figure is a rhombus then a figure is a parallelogram is**

Question 6

The contrapositive of the statement if a figure is a rhombus then a figure is a parallelogram is

A) if not a figure is a rhombus then not a figure is a parallelogram

B) if not a figure is a parallelogram then not a figure is a rhombus

C) if a figure is a parallelogram then a figure is a rhombus

D) if a figure is a rhombus then not a figure is a parallelogram

A if not a figure is a rhombus then not a figure is a parallelogram

B if not a figure is a parallelogram then not a figure is a rhombus

C if a figure is a parallelogram then a figure is a rhombus

D if a figure is a rhombus then not a figure is a parallelogram

Understand It with Pulse | Flag a mistake

7 **The contrapositive of the statement if a number is divisible by 4 then a number is even is**

- **A** if not a number is even then not a number is divisible by 4
- **B** if not a number is divisible by 4 then not a number is even
- **C** if a number is even then a number is divisible by 4
- **D** if a number is divisible by 4 then not a number is even

Understand It with Pulse | Flag a mistake

8 **The contrapositive of the statement if a triangle is equilateral then a triangle is isosceles is**

- **A** if not a triangle is equilateral then not a triangle is isosceles
- **B** if a triangle is isosceles then a triangle is equilateral
- **C** if a triangle is equilateral then not a triangle is isosceles
- **D** if not a triangle is isosceles then not a triangle is equilateral

Understand It with Pulse | Flag a mistake

9 **The contrapositive of the statement if it snows then school closes is**

- **A** if not it snows then not school closes
- **B** if not school closes then not it snows
- **C** if school closes then it snows
- **D** if it snows then not school closes

Understand It with Pulse | Flag a mistake

10 **The contrapositive of the statement if n is a multiple of 10 then n is a multiple of 5 is**

- **A** if not n is a multiple of 10 then not n is a multiple of 5
- **B** if n is a multiple of 5 then n is a multiple of 10
- **C** if not n is a multiple of 5 then not n is a multiple of 10
- **D** if n is a multiple of 10 then not n is a multiple of 5

Understand It with Pulse | Flag a mistake

11 **The contrapositive of the statement if x is greater than 5 then x is greater than 3 is**

A if not x is greater than 5 then not x is greater than 3

B if x is greater than 3 then x is greater than 5

C if not x is greater than 3 then not x is greater than 5

D if x is greater than 5 then not x is greater than 3

Understand It with Pulse | Flag a mistake

12

The converse of the statement if a figure is a square then a figure has four sides is

Question 12

The converse of the statement if a figure is a square then a figure has four sides is

A) if not a figure is a square then not a figure has four sides

B) if a figure has four sides then a figure is a square

C) if not a figure has four sides then not a figure is a square

D) if a figure is a square and a figure has four sides

A if not a figure is a square then not a figure has four sides

B if a figure has four sides then a figure is a square

C if not a figure has four sides then not a figure is a square

D if a figure is a square and a figure has four sides

Understand It with Pulse

Flag a mistake

13 **The converse of the statement if a number is a multiple of 6 then a number is even is**

A if not a number is a multiple of 6 then not a number is even

B if not a number is even then not a number is a multiple of 6

C if a number is a multiple of 6 and a number is even

D if a number is even then a number is a multiple of 6

Understand It with Pulse | Flag a mistake

14 **The converse of the statement if a shape is a triangle then a shape has three sides is**

A if a shape has three sides then a shape is a triangle

B if not a shape is a triangle then not a shape has three sides

C if not a shape has three sides then not a shape is a triangle

D if a shape is a triangle and a shape has three sides

Understand It with Pulse | Flag a mistake

15 **The converse of the statement if it rains then the ground is wet is**

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

Understand It with Pulse | Flag a mistake

16 **A set with 4 elements has this many subsets**

ANSWER _____

Understand It with Pulse | Flag a mistake

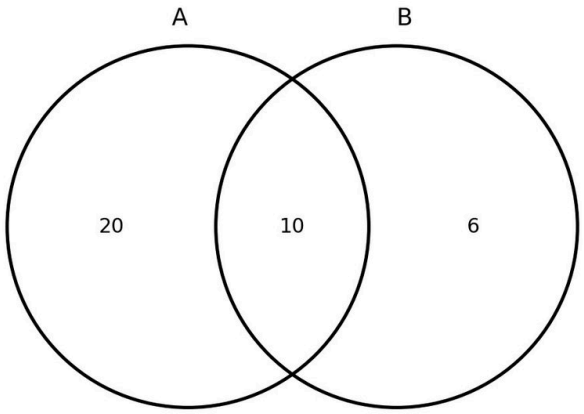
17 **A universal set has 40 elements and set A has 22 elements. The number of elements in the complement of A is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18

In a Venn diagram, 20 elements are in set A only, 10 are in both sets, and 6 are in set B only. The number of elements in set A is



Question 18

In a Venn diagram, 20 elements are in set A only, 10 are in both sets, and 6 are in set B only. The number of elements in set A is

ANSWER

Understand It with Pulse | Flag a mistake

19

In a Venn diagram, 15 elements are in set A only, 7 are in both sets, and 9 are in set B only. The number of elements in the union of A and B is

Question 19

In a Venn diagram, 15 elements are in set A only, 7 are in both sets, and 9 are in set B only. The number of elements in the union of A and B is

ANSWER

Understand It with Pulse | Flag a mistake

20 **Set A has 30 elements and set B has 16 elements, with 10 elements in both. The number in A or B is**

ANSWER

Understand It with Pulse | Flag a mistake

21 **A set with 5 elements has this many subsets**

ANSWER

Understand It with Pulse | Flag a mistake

22 **A universal set has 60 elements and set A has 35 elements. The number of elements in the complement of A is**

ANSWER

Understand It with Pulse | Flag a mistake

23 **In a Venn diagram, 15 elements are in set A only, 7 are in both sets, and 9 are in set B only. The number of elements in set A is**

Question 23

In a Venn diagram, 15 elements are in set A only, 7 are in both sets, and 9 are in set B only. The number of elements in set A is

ANSWER

Understand It with Pulse | Flag a mistake

24

In a Venn diagram, 18 elements are in set A only, 12 are in both sets, and 4 are in set B only. The number of elements in the union of A and B is

Question 24

In a Venn diagram, 18 elements are in set A only, 12 are in both sets, and 4 are in set B only. The number of elements in the union of A and B is

ANSWER

Understand It with Pulse | Flag a mistake

25

Set A has 22 elements and set B has 16 elements, with 7 elements in both. The number in A or B is

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 8
2. 20
3. 20
4. 36
5. 25
6. B
7. A
8. D
9. B
10. C
11. C
12. B
13. D
14. A
15. D
16. 16
17. 18
18. 30
19. 31
20. 36
21. 32
22. 25
23. 22
24. 34
25. 31

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