NOVA SCOTIA MATHEMATICS 12 · UNIT B

Set Theory and Logical Reasoning — Practice Test

Nova Scotia Mathematics 12 • 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 **Set A has 20 elements, set B has 15 elements, and their intersection has 5 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **Set A has 30 elements, set B has 25 elements, and their intersection has 10 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **Set A has 18 elements, set B has 12 elements, and their intersection has 4 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Set A has 40 elements, set B has 30 elements, and their intersection has 15 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **Set A has 25 elements, set B has 20 elements, and their intersection has 8 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Set A has 12 elements, set B has 18 elements, and their intersection has 6 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **Set A has 50 elements, set B has 40 elements, and their intersection has 20 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **Set A has 22 elements, set B has 16 elements, and their intersection has 7 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **Set A has 35 elements, set B has 28 elements, and their intersection has 12 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **Set A has 15 elements, set B has 25 elements, and their intersection has 5 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **Set A has 28 elements, set B has 22 elements, and their intersection has 9 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **Set A has 45 elements, set B has 35 elements, and their intersection has 18 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **Set A has 19 elements, set B has 14 elements, and their intersection has 6 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **Set A has 33 elements, set B has 27 elements, and their intersection has 11 elements. Find the number of elements in A union B.**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **The union of sets A and B contains elements in**

- A A or B or both
- B A and B only
- C neither A nor B
- D A only

Understand It with Pulse | Flag a mistake

16 **The intersection of sets A and B contains elements in**

- A A or B
- B both A and B
- C A only
- D neither set

Understand It with Pulse | Flag a mistake

17 **The complement of set A contains elements**

A in A only

B in every set

C not in A

D in the empty set only

Understand It with Pulse | Flag a mistake

18 **The empty set has**

A one element

B two elements

C infinite elements

D no elements

Understand It with Pulse | Flag a mistake

19 **A subset of A is a set whose elements are**

A all in A

B all outside A

C partly in A

D larger than A

Understand It with Pulse | Flag a mistake

20 **The converse of if P then Q is**

A if not P then not Q

B if Q then P

C if not Q then not P

D P and Q

Understand It with Pulse | Flag a mistake

21 **The contrapositive of if P then Q is**

A if Q then P

B if not P then not Q

C if not Q then not P

D P or Q

Understand It with Pulse | Flag a mistake

22 **The inverse of if P then Q is**

A if Q then P

B if not Q then not P

C P and Q

D if not P then not Q

Understand It with Pulse | Flag a mistake

23 **A statement and its contrapositive always have**

- A the same truth value
- B opposite truth values
- C no truth value
- D different subjects

Understand It with Pulse | Flag a mistake

24 **A Venn diagram uses overlapping shapes to show**

- A only numbers
- B relationships between sets
- C only functions
- D only graphs

Understand It with Pulse | Flag a mistake

25 **Two sets are disjoint if they have**

A all elements in common

B one element in common

C no elements in common

D the same size

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	30	**10.**	35	**19.**	A
2.	45	**11.**	41	**20.**	B
3.	26	**12.**	62	**21.**	C
4.	55	**13.**	27	**22.**	D
5.	37	**14.**	49	**23.**	A
6.	24	**15.**	A	**24.**	B
7.	70	**16.**	B	**25.**	C
8.	31	**17.**	C		
9.	51	**18.**	D		

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