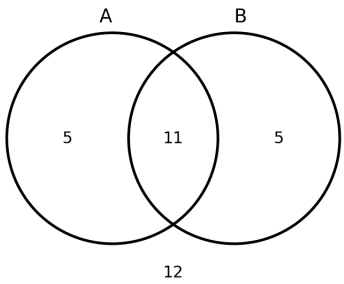
SASKATCHEWAN FOUNDATIONS OF MATHEMATICS 30 · UNIT B · 25 QUESTIONS

Set Theory and Logic — 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 Venn diagram shows sets A and B. The number of elements in exactly one of the sets is**



ANSWER

Understand It with Pulse | Flag a mistake

2 **A universal set has 38 elements and set A has 13 elements. The number of elements in the complement of A is**

ANSWER

Understand It with Pulse | Flag a mistake

3 **Set A has 13 elements, set B has 18 elements, and 7 elements are in both. The number in A or B is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **If every element of set A is also in set B, then A is**

A a subset of B

B a superset of B

C disjoint from B

D equal to the complement of B

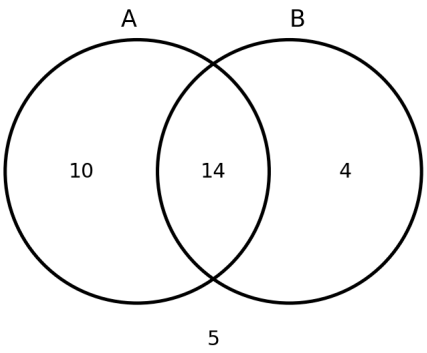
Understand It with Pulse | Flag a mistake

5 **Set A has 11 elements, set B has 18 elements, and 5 elements are in both. The number in A or B is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The Venn diagram shows sets A and B. The number of elements in set A is**



ANSWER

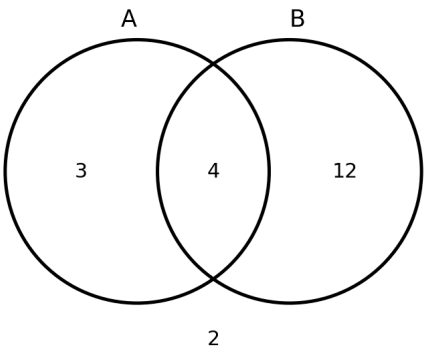
Understand It with Pulse | Flag a mistake

7 **Set A has 19 elements, set B has 26 elements, and 6 elements are in both. The number in A or B is**

ANSWER

Understand It with Pulse | Flag a mistake

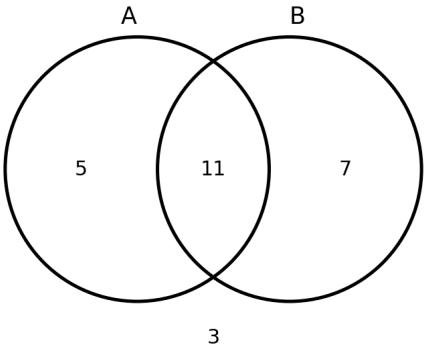
8 **The Venn diagram shows sets A and B. The number of elements in both sets A and B is**



ANSWER

Understand It with Pulse | Flag a mistake

9 **The Venn diagram shows sets A and B. The number of elements in neither set A nor set B is**



ANSWER

Understand It with Pulse | Flag a mistake

10 **The complement of a set contains**

- A only the elements in the set
- B everything in the universal set not in the set
- C the empty set only
- D everything in the universal set

Understand It with Pulse | Flag a mistake

11 **In a class of 30 students, 18 play soccer, 12 play hockey, and 6 play both. The number who play at least one of the sports is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **A universal set has 30 elements and set A has 9 elements. The number of elements in the complement of A is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A universal set has 25 elements and set A has 9 elements. The number of elements in the complement of A is**

ANSWER

Understand It with Pulse | Flag a mistake

14 **A survey finds 40 people like tea, 25 like coffee, and 15 like both. The number who like tea or coffee is**

ANSWER

Understand It with Pulse | Flag a mistake

15 **Sets A and B are disjoint. Set A has 9 elements and set B has 14. The number in A union B is**

ANSWER

Understand It with Pulse | Flag a mistake

16 **For two sets, the part in A but not in B contains 7 elements, and the part in both contains 3. The number in A is**

ANSWER

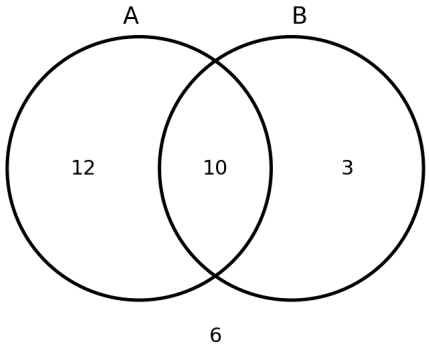
Understand It with Pulse | Flag a mistake

17 **A universal set has 50 elements. Set A has 20, set B has 15, and 5 are in both. The number in neither A nor B is**

ANSWER

Understand It with Pulse | Flag a mistake

18 **The Venn diagram shows sets A and B. The number of elements in set B is**



ANSWER

Understand It with Pulse | Flag a mistake

19 **Which of the following is the same as the complement of A union B**

- **A** the complement of A intersected with the complement of B
- **B** the union of A and B
- **C** the intersection of A and B
- **D** the complement of A only

Understand It with Pulse | Flag a mistake

20 **A box has 12 red pens and 8 blue pens. A pen is chosen at random. The probability it is not red is**

- **A** 2
- **B** 3
- **C** 1
- **D** 1

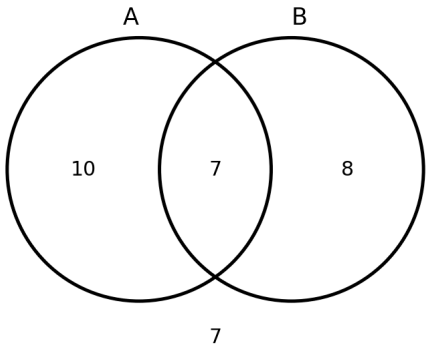
Understand It with Pulse | Flag a mistake

21 **The complement of the set of even numbers, inside the integers, is the set of**

- **A** prime numbers
- **B** odd numbers
- **C** multiples of 4
- **D** negative numbers

Understand It with Pulse | Flag a mistake

22 **The Venn diagram shows sets A and B. The total number of elements surveyed is**



ANSWER _____

Understand It with Pulse | Flag a mistake

23 **If A is a subset of B, then the complement of B is a subset of the complement of**

- **A** A
- **B** B
- **C** the universal set
- **D** the empty set

Understand It with Pulse | Flag a mistake

24 **A class has 28 students. 17 take math and the rest do not. The number who do not take math is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **Two sets are equal when they have**

A the same elements

B the same number of elements only

C no elements in common

D one element each

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	10	**10.**	B	**19.**	A
2.	25	**11.**	24	**20.**	A
3.	24	**12.**	21	**21.**	B
4.	A	**13.**	16	**22.**	32
5.	24	**14.**	50	**23.**	A
6.	24	**15.**	23	**24.**	11
7.	39	**16.**	10	**25.**	A
8.	4	**17.**	20		
9.	3	**18.**	13		

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