ALBERTA MATH 30-2 · UNIT 1 · 5 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 **Given U = {a, b, c, d, e, f} and A = {a, c, e}, which statement is true?**

- **A** $d \notin A$
- **B** $b \in A$
- **C** $f \in A$
- **D** $A \subseteq \{a, c\}$

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2 **Colourful spinner wheel is divided into eight equal sections, no numbers. Set M is the set of even numbers between 1 and 9, and set N is the set of multiples of 4 between 1 and 13. Which statement is true?**



A $M \subseteq N$

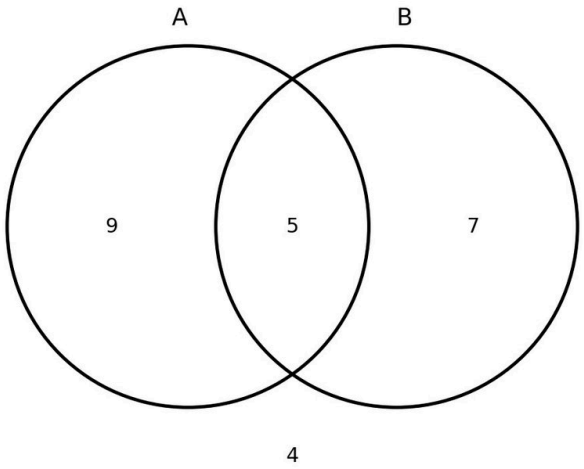
B $N \subseteq M$

C $M \cap N = \varnothing$

D $M \cap N = \{4, 8\}$

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3 **The Venn diagram below shows sets A and B. The number of elements in A ∪ B is**



Question 3

The Venn diagram below shows sets A and B. The number of elements in $A \cup B$ is

A) 21

B) 14

C) 16

D) 25

A 21

B 14

C 16

D 25

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4 **A universal set U has 45 elements and set C has 27 elements. The number of elements in the complement of C is ____ Record your answer as a whole number.**

ANSWER _____

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5 **All rectangles have equal diagonals. Written as an if-then statement. What is its conclusion?**

Question 5

All rectangles have equal diagonals. Written as an if – then statement. What is its conclusion?

A) A figure is a rectangle

B) Its diagonals are not equal

C) Its diagonals are equal

D) A figure is not a rectangle

A A figure is a rectangle

B Its diagonals are not equal

C Its diagonals are equal

D A figure is not a rectangle

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ANSWER KEY

1. A
2. D
3. A
4. 18
5. C

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