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Worksheet: The Algebra of Sets: Properties & Laws of Set Theory

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1. Set A = {1, 5, 6, 7} and Set B = {0, 1, 7, 15}. What is the A ∪ B?

- ◯ A ∪ B = {1, 7}
- ◯ A ∪ B = {1, 5, 6, 7, 15}
- ◯ A ∪ B = {0, 1, 1, 5, 6, 7, 15}
- ◯ A ∪ B = {0, 1, 5, 6, 7, 15}

2. Set A = {1, 5, 6, 7} and Set B = {0, 1, 7, 15}. Which statement regarding these sets is TRUE?

- ◯ 5 ∈ Sets A and B
- ◯ 1 ∈ Sets A and B
- ◯ 7 ∉ Sets A and B
- ◯ 1 ∉ Sets A and B

3. Set A = {1, 5, 6, 7} and Set B = {0, 1, 7, 15}. What is A ∩ B?

- ◯ A ∩ B = {1, 5, 7, 15}
- ◯ A ∩ B = {0, 15}
- ◯ A ∩ B = {1, 7}
- ◯ A ∩ B = {1, 1}

4. Set A = {-10, -5, -2, -1, 0). Which of the following is a complement of set A?

- ◯ -1
- ◯ -5
- ◯ 1
- ◯ -10

5. The following is an example of which of the laws of sets? D ∪ (S ∩ B) = (D ∪ S) ∩ (D ∪ B)

- ◯ Distributive law
- ◯ Associative law
- ◯ Difference of sets
- ◯ Commutative law