Which sets are equal?

1. {1,1,3,3,3,5,5,5} and {1,3,5}
2. {{1}} and {1}

Is 2 an element of:

3. $\{x \in \mathbf{R} \mid x \text{ is the square of an integer}\}$
4. {{2},2}

What is:

5. | {Red, Green, Blue} |
6. | {{1}, ∅} |

7. What is the power set of: {Red, Green, Blue}
8. What is the Cartesian product of: {x,y}x{R,G,B}
9. What is the truth value of: $\forall n \in \mathbf{Z}(n^2 \geq n)$

A={1,2,3}, B={3,4}, C={1, 3, 5}

10. A U B?
11. $A \cap B$?
12. A – B?
13. $\overline{A}$ where the universal set is: {0,1,2,3,4,5}

14. Use a membership table to prove: $\overline{A \cup B} = \overline{A} \cap \overline{B}$

15. What is:
    $A \cup B \cup C$
    $A \cap B \cap C$

Which sets are equal?

1. {1,1,3,3,3,5,5,5} and {1,3,5} Yes
2. {{1}} and {1} No

Is 2 an element of:

3. $\{x \in \mathbf{R} \mid x \text{ is the square of an integer}\}$ No
4. {{2},2} Yes

What is the cardinality of:

5. {Red, Green, Blue} 3
6. $\{\{1\}, \varnothing\}$ 2
7. What is the power set of: {R, G, B}
   $\{\varnothing,\{R\},\{G\},\{B\},\{R,G\},\{R,B\},\{G,B\},\{R,G,B\}\}$
8. What is the Cartesian product of: {x,y}x{R,G,B}
   {(x,R),(x,G),(x,Z), (y,R),(y,G),(y,Z)}
9. What is the truth value of: $\forall n \in \mathbf{Z}(n^2 \geq n)$ True

A={1,2,3}, B={3,4}, C={1,3,5}

10. A U B? {1,2,3,4}
11. A ∩ B? {3}
12. A – B? {1,2}
13. $\overline{A}$ for universal set: {0,1,2,3,4,5} {0,4,5}

14. Use a membership table to prove: $\overline{A \cup B} = \overline{A} \cap \overline{B}$

15. What is:

$A \cup B \cup C = \{1,2,3,4,5\}$

$A \cap B \cap C = \{3\}$

A	B	$\overline{A}$	$\overline{B}$	A U B	$\overline{A \cup B}$	$\overline{A} \cap \overline{B}$
1	1	0	0	1	0	0
1	0	0	1	1	0	0
0	1	1	0	1	0	0
0	0	1	1	0	1	1