Name ....

1.	2.	3.	4.	5.	$\sum$

1. Write the mathematical formulas corresponding to the following statements with the help of the following signs only: propositional connectives, quantifiers, variables varying through set $\mathbb{R}$ and symbols indicated in brackets

all numbers except exactly one have an inverse $(\cdot, +, =, <, 0, 1)$

2. For what numbers $x \in \mathbb{N}$ the following holds.

$\{\{1, x\}, \{3, x, 8\}\} \subseteq \{\{1\}, \{1, 2\}, \{2, 3, 8\}, \{1, 7\}, \{1, 3\}, \{3, 1, 8\}, \{3, 8\}, \{5, 7, 8\}\}$

3. Prove or disprove $(A \cup B) \div (B \cup C) = A \div C$

4.Find

$$\bigcap_{i\in\mathbb{N}} \left[1 - \frac{1}{(i-1)^2+1}, 3 + \frac{1}{(i-2)^2+1}\right) =$$

$$\bigcup_{i\in\mathbb{N}} \left[1 - \frac{1}{(i-1)^2+1}, 3 + \frac{1}{(i-2)^2+1}\right) =$$

5. Prove or disprove $(A \div C) - (B - A) = (A - B) \cup [C - (A \cup B)]$

Name ....

1.	2.	3.	4.	5.	$\sum$

1. Write the mathematical formulas corresponding to the following statements with the help of the following signs only: propositional connectives, quantifiers, variables varying through set $\mathbb{R}$ and symbols indicated in brackets

if a real number has an inverse then it has exactly one inverse $(\cdot, +, =, <, 0, 1)$

2. For what numbers $x \in \mathbb{N}$ the following holds.

$$\{\{2, x\}, \{4, x, 8\}\} \subseteq \{\{2\}, \{1, 2\}, \{2, 4, 8\}, \{2, 7\}, \{2, 8\}, \{2, 4, 8\}, \{4, 8\}, \{5, 7, 3\}\}$$

3. Prove or disprove $(A \cup B) \div C = (A \div C) \cup (B \div C)$

4.Find

$$\bigcap_{i\in\mathbb{N}} \left(2+\frac{1}{(i-2)^2+1}, 4-\frac{1}{(i-1)^2+1}\right] =$$

$$\bigcup_{i\in\mathbb{N}} \left(2+\frac{1}{(i-2)^2+1}, 4-\frac{1}{(i-1)^2+1}\right] =$$

5. Prove or disprove $(A-B)\cup(B-C)\cup(C-A) = (A\cup B\cup C) - (A\cap B\cap C)$