# List of symbols and notations [v 2024.02.17]

|  |  |  |
| --- | --- | --- |
| **Code** |  |  |
| 2205 | ∅ | The empty set |
|  | { a,b,c } | The set containing a, b, c (and nothing else). |
|  | { … | … } | The set of all … such that … |
| 2208 | a ∈ V | a is an element of V |
| 2209 | a ∉ V | a is not an element of V |
| 2286 | V ⊆ W | V is a subset of W |
| 2282 | V ⊂ W | V is a proper subset of W |
| 2288 | V ⊈ W | V is not a subset of W |
| 2229 | V ∩ W | The intersection of V and W |
| 222A | V ∪ W | The union of V and W |
| 2118 | ℘(V) | Power set of V (the set of all subsets of V) |
|  | V x W | Product of V and W (the set of all pairs (v, w) such that v ∈ V and w ∈ W) |
|  | V \ W, V - W | V minus W, V except W (the set of all elements of V that are not in W) |
|  | V‾, V’, or Vc | V-complement, **U** \ V, where **U** is a universal set, supposed to be clear from context |
| 2192 | f: V → W | f is a function from V to W |
|  | #V, |V|, Card(V) | Number of elements of the (finite) set V |
| 2227 | P ∧ Q, P & Q | P and Q |
| 2228 | P ∨ Q | P or Q |
| 00AC | ¬P, -P | not P |
| 21D2 | P ⇒ Q | P implies Q, ¬P ∨ Q |
| 21D4 | P ⇔ Q | (P implies Q) and (Q implies P) |
| 2200 | ∀x ∈ V [ … ] | all x in V have the property … |
| 2203 | ∃x ∈ V [ … ] | some x in V have the property … |
| 2115 | ℕ | The set {0, 1, 2, …} of all natural numbers |
| 2124 | ℤ | The {…, -2, -1, 0, 1, 2, … } of all integer numbers |
| 211A | ℚ | The set of all rational numbers |
| 211D | ℝ | The set of all points on the real number line |