1.2.01 | Test yourself | Set, element of a set, subset of a set

Task 1. Fill in the blank with the proper sign: =, ∈, ⊂ . Examples (b) and (g) have two solutions.

(a) {1, 4} ... {1, 2, 3 ,4 ,5}

(b) { 2^0,2^1, 2^2} ... {1, 2, 4} { 2^0,2^1, 2^2} ... {1, 2, 4}

(c) 7 ... {2, 5, 7, 9, 11}

(d) {7} ... {2, 5, 7, 9, 11}

(e) {7} ... {{2}, {5}, {7}, {9}, {11}}

(f) ∅ … {1,2,3}

(g) ∅ …{∅} ∅ …{∅}

Let A be a finite set. The **cardinal** number of the set A is a number of elements of the set A.
The cardinal number of the set A is denoted **|A|** or $\overline{\overline{\boldsymbol{A}}}$.
For example, if A={1,4, 5} then |A|=3.

The **power set** of the set A is defined as the set of all subsets of the set A.

Task 2. Fill in the table:

A	$\|A\|$	P - power set of the set A	$\|P\|$
$A = \emptyset$	$\|A\| = 0$	P={∅}	$\|P\| = 1$
$A = \{1\}$	$\|A\| = 1$	P={∅, {1}}	$\|P\| = 2$
$A = \{1, 2\}$	$\|A\| = 2$	P={∅, {1}, {2}, {1,2}}	$\|P\| = \cdots$
$A = \{1, 2, 3\}$			
$A = \{1, 2 , 3, 4\}$			
$A = \{1, 2 , 3, 4, 5\}$			

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