**Task 13. Categories**

For any task it is necessary to describe the given category. The answer includes following steps:

1. What are the objects of this category?
2. What are the morphisms of this category?
3. What are the isomorphisms of this category?
4. What is a subobject of this category?
5. What is a product of objects of this category?
6. Give an example of object of this category.
7. Give an example of property of this category.
8. Give an example of subcategory of this category

**Variant 1**

Measured space.

**Variant 2**

Preordered set.

 **Variant 3**

Semigroup.

**Variant 4**

Partially ordered set.

**Variant 5**

Vector space.

**Variant 6**

Metric space.

**Variant 7**

Monoid.

**Variant 8**

Topological space.

**Variant 9**

Group.

**Variant 10**

Topological vector space.

**Variant 11**

Groupoid.