



## Panel of forces, equilibrium of a rigid body and machine elements

EQ032J1

### Function

Intended for experimental study, physics laboratory and carrying out physics experiments on: Statics. The composition of competing coplanar forces,  $90^\circ$  apart. Force and vector. What is meant by vector. Characteristics of a vector. Graphic representation of a vector quantity. Collinear vectors and coplanar vectors. The resulting vector. Operations with coplanar and non-parallel vectors. Orthogonal coplanar vectors (perpendicular to each other), a special case. Types of strength. Measuring the total weight of the masses. The composition of competing coplanar forces,  $60^\circ$  apart. Remembering collinear vectors and coplanar vectors. Non-orthogonal coplanar vectors, parallelogram rule. Measuring the weight force of objects. The composition of competing coplanar forces  $120^\circ$  apart. Remembering collinear vectors and coplanar vectors. Non-orthogonal coplanar vectors, parallelogram rule. The diagram of the acting forces. The composition of competing coplanar forces. Remembering that it is the force, vector and the parallelogram rule. Collinear vectors and coplanar vectors. The resulting vector. Measuring the weight force of objects. Force diagram. Comparing the resultant force with the balancing force. Varying the forces acting on O. Rigid body equilibrium conditions, Varignons theorem.

### Knowledge areas

Physics

### Level

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