**SCALARS AND VECTORS**

Vector quantities have both magnitude and direction, whereas scalar quantities have magnitude only.

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| ***SCALARS*** | ***VECTORS*** |
| Temperature, potential difference, distance, time, speed, power, mass, length, energy (work), pressure, volume, charge, density | Displacement, velocity, force (weight), acceleration, momentum, electric field strength, torque, angular momentum, moments |

**Addition of Vectors**

The resultant of two or more vectors is the single vector which produces the same effect (in both magnitude and direction).



**Parallelogram Rule**

If two vectors,andare represented in magnitude and direction by the side OA and OB of a parallelogram OACB, then represents their resultant.



**Question**

Find the resultant of two forces, 8N and 6N acting at an angle of 380 to each other using both scale drawing and calculation.

**Components of Vectors**



**Question**

Using components, find the resultant of two forces of magnitude 6N and 8N acting at 380 to each other.

**Lami’s Theorem**

If **three forces** A, B and C are in **equilibrium**, then

A/sin a = B/sin b = C/sin c (similar to the sin Rule). See also Triangle of Forces and Polygon of Forces in Text.

