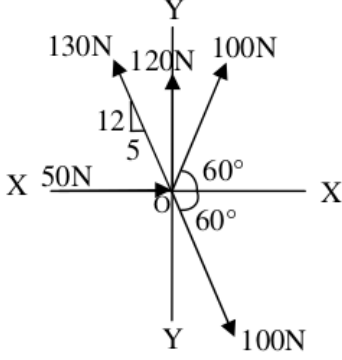
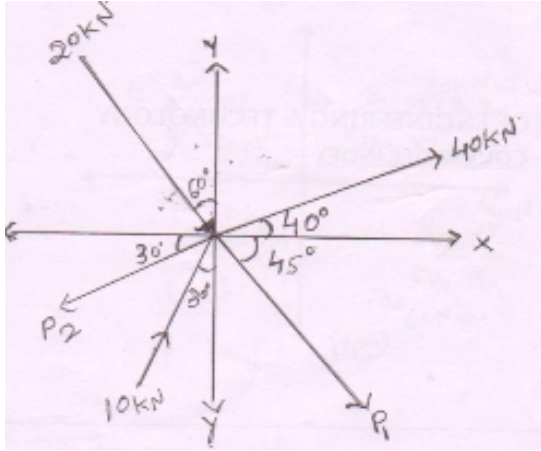
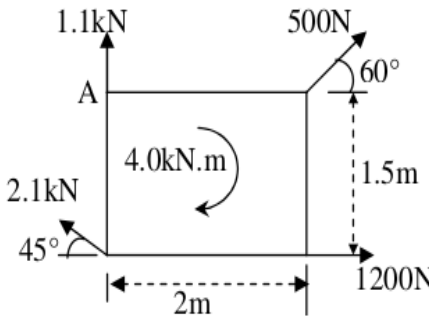
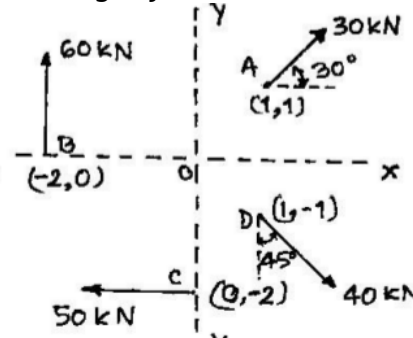
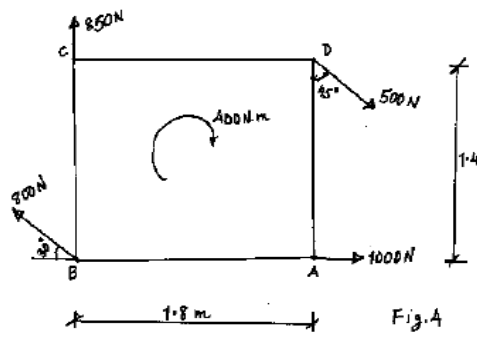


**ALPHA COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**DIPLOMA CIVIL 2<sup>nd</sup> SEM. APPLIED MECHANICS (3300008)**  
**CO-PLANER CONCURRENT FORCES**  
**FAQ'S**

Q-1	Find magnitude of two forces such that if they act at right angle, their resultant is 90 N and when they act at 60°, their resultant is 117 N. (SUMMER 2014)
Q-2	A system of forces is made of two forces of equal magnitude .Determine, using the triangle law of forces, the angle between two forces if magnitude of resultant force is equal to the magnitude of one of the forces. (DEC-2011)
Q-3	<p>The following forces are acting at a point, find the magnitude and direction of the resultant force.</p> <ol style="list-style-type: none"> <li>1. 550N acting towards North</li> <li>2. 900N acting at 40° towards South of West</li> <li>3. 1.25 kN acting at 60° towards South of East</li> <li>4. 400N acting from West to East</li> </ol> <p style="text-align: right;">(WINTER 2013)</p>
Q-4	<p>Determine magnitude and direction of resultant force of the force system shown in figure.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">(SUMMER.2012)</p>
Q-5	<p>A Force system consisting of four forces and its resultant are shown in fig.1.Determine magnitude of unknown forces P1 and P2.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">(MAY-2012)</p>

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**FAQ'S (CO-PLANER NON-CONCURRENT FORCES)**

Q-1	<p>Enlist equilibrium conditions for co-planer non-concurrent forces. Determine the resultant and locate the same with respect to point 'A' of a non-concurrent force system shown in fig. (WINTER 2013)</p> 
Q-2	<p>Find magnitude, direction and location of resultant of force system with respect to point 'O' shown in fig. (JUNE 2011)</p> 
Q-3	<p>For a coplanar, non-concurrent force system shown in Fig. determine magnitude, direction and position with reference to point A of resultant force. (WINTER 2013)</p> 
Q-4	<p>A beam ABC is 6m long. End A is hinged and end B is supported on roller. AB is 4m and portion BC is overhanging. Load on span AB is 5 kN/m u.d.l. And point load of 8 kN acting at point C, find the reaction at A and B. (Nov. 2006)</p>
Q-5	<p>A beam ABC is 6m long. End A is hinged and end B is roller. AB is of 4m and BC is overhanging. Load of 5kN and 8kN are acting at 1m and 3m from end A. Portion BC is loaded by an u.d.l. Of 2KN/m. Calculate reactions at A and B. (Oct. 1999, 2002)</p>
Q-6	<p>Find graphically, reactions for the beam, OR explain graphical method to find reactions for the beam. (Assume suitable data) (Similar in GTU)</p>