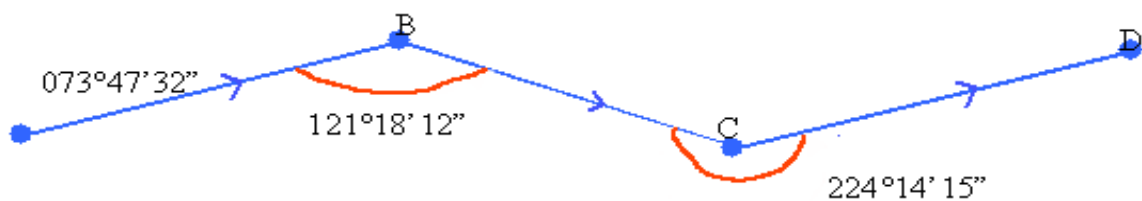


# MATHEMATICS

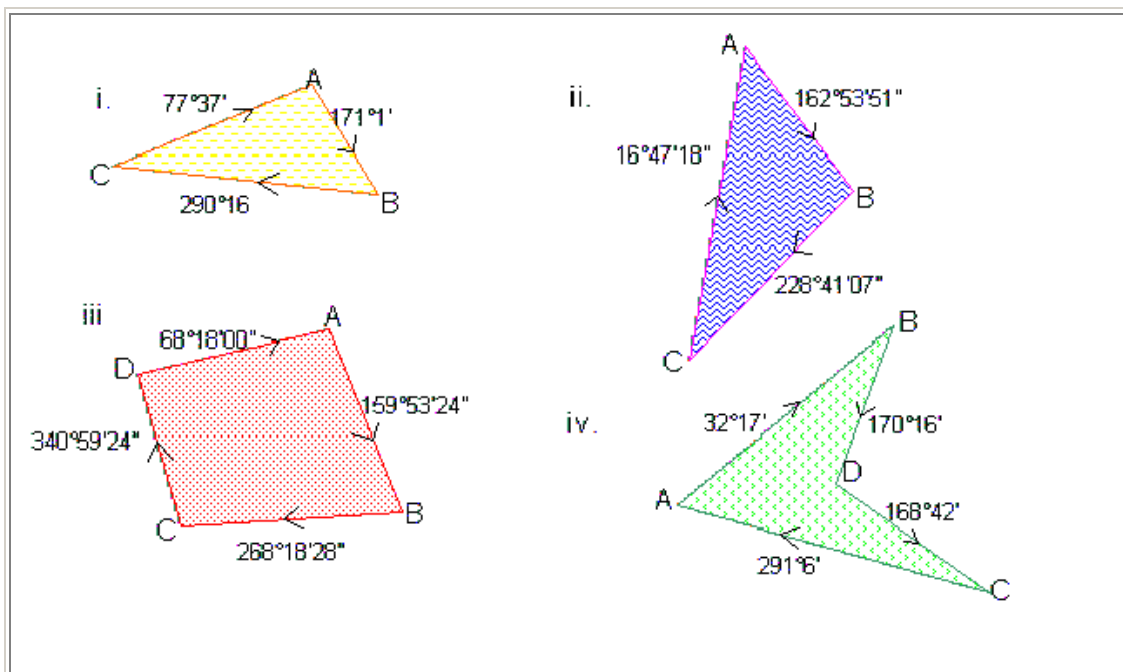
## Level One

### Geometry and Surveying

- 1) A circular arc has a radius of 620m and a central angle of  $41^{\circ}15'30''$ . Calculate the arc length.
- 2) Below is a traverse with an initial bearing and two horizontal angles taken. Calculate the bearing of the line BC and CD.



- 3) Compute all the interior angles in the traverse networks below, where bearings are given.



*Note the drawings are not to scale*