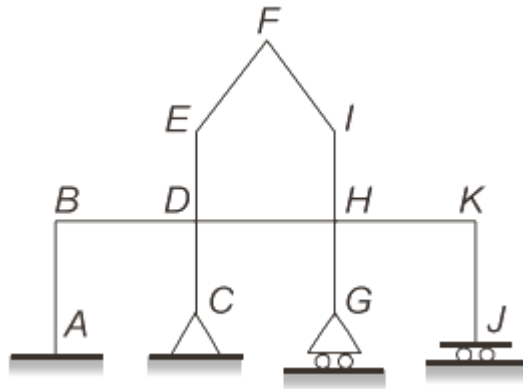


Static & Kinematic Indeterminacy



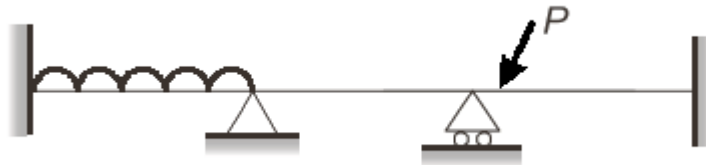
Calculate kinematic indeterminacy. Neglect the axial deformation.

Ans: 14



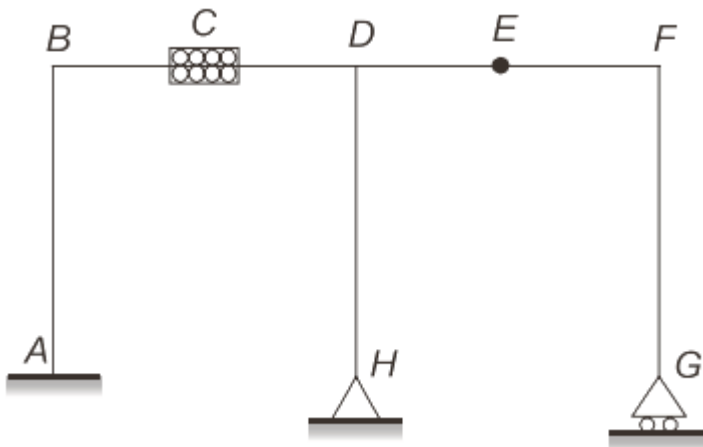
Calculate static indeterminacy.

Ans: 1



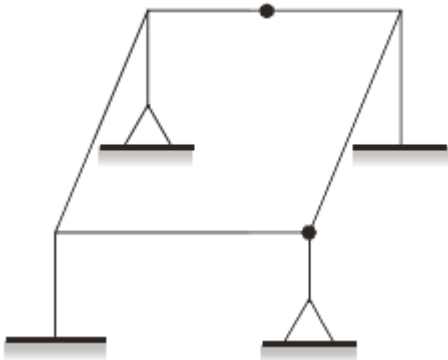
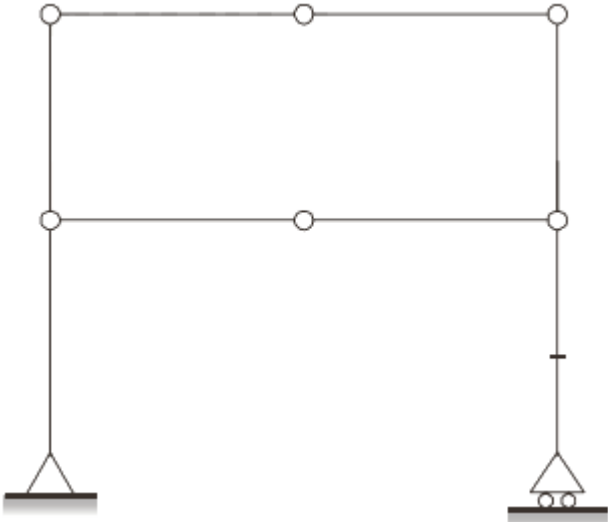
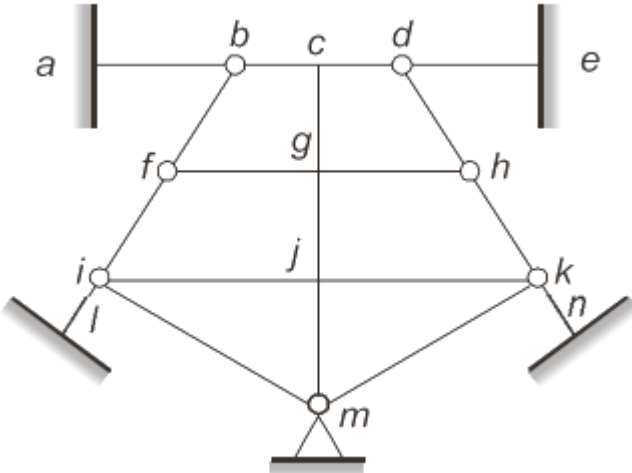
Calculate static indeterminacy

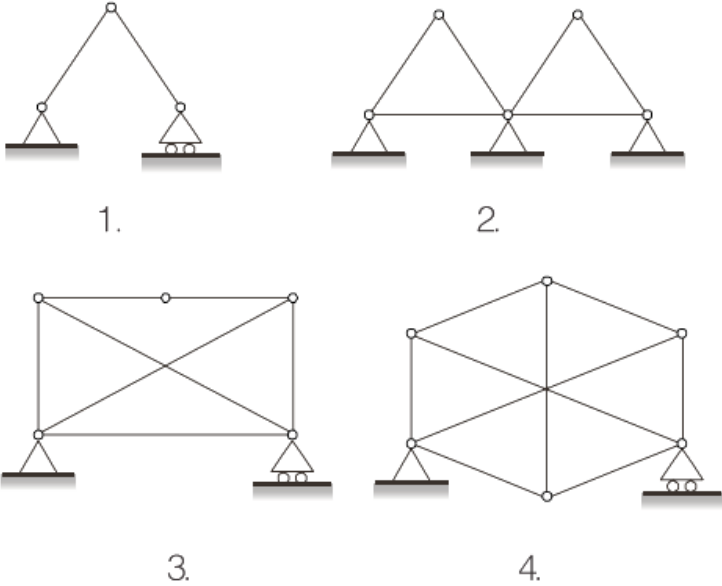
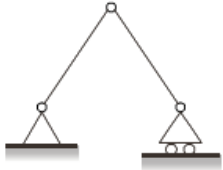
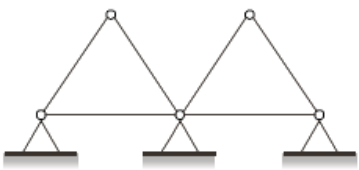
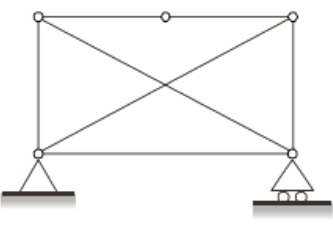
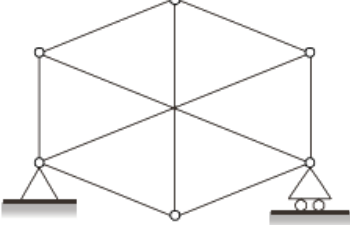
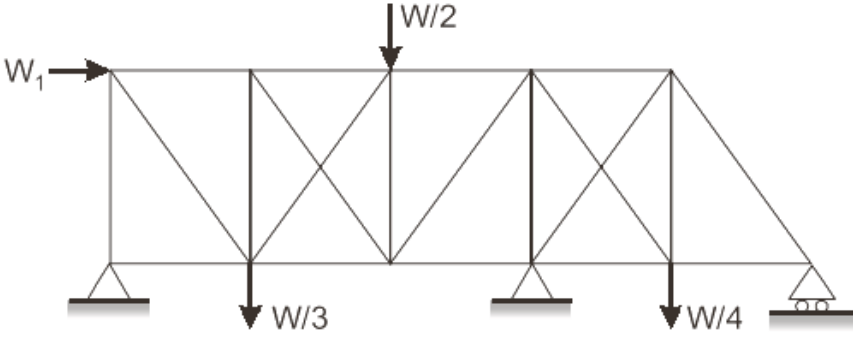
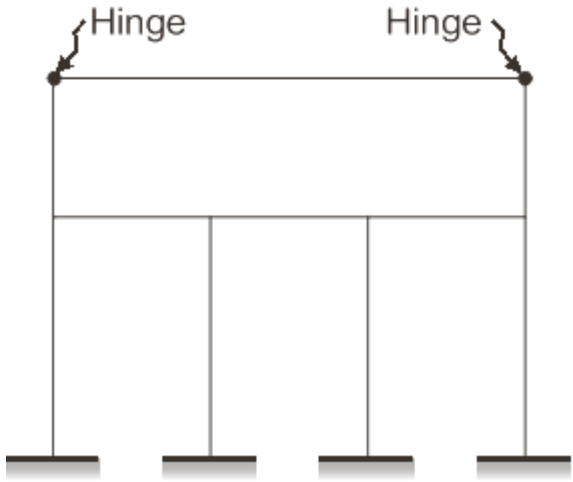
Ans: 5



Calculate static and kinematic indeterminacy

Ans: 2 & 13

 <p>A 3D truss structure consisting of four vertical legs, each supported by a pin support. The top of the legs are connected by a horizontal truss. This top truss has two internal joints: one at the top center and one at the bottom center. The legs are connected to these two joints, forming a rectangular prism-like structure.</p>	<p>Calculate static indeterminacy of 3D frame</p> <p>Ans: 9</p>
 <p>A 2D truss structure with a pin support on the left and a roller support on the right. The structure consists of two vertical legs and two horizontal members. The top horizontal member has two internal joints, and the bottom horizontal member has two internal joints. The joints are arranged in a rectangular grid.</p>	<p>The structure is statically determinate or indeterminate?</p> <p>Ans: Determinate</p>
 <p>A complex 2D truss structure with joints labeled a through m. Joints a, b, c, d, e are on the top horizontal member. Joints f, g, h are on the middle horizontal member. Joints i, j, k are on the bottom horizontal member. Joint m is at the bottom center. The structure is supported by a pin support at joint i, a roller support at joint m, and a roller support at joint k. There are also fixed supports at joints a and e.</p>	<p>Calculate the static indeterminacy of plane frame</p> <p>Ans: 13</p>

 <p>1. </p> <p>2. </p> <p>3. </p> <p>4. </p>	<p>Which pin-jointed plane frames are stable?</p> <p>Ans: 2, 3, 4</p>
	<p>Static indeterminacy?</p> <p>Ans: 4</p>
	<p>Degree of static indeterminacy?</p> <p>Ans: 10</p>

	<p>Static indeterminacy?</p> <p>Ans: 11</p>
	<p>Kinematic indeterminacy? Members are in extensible</p> <p>Ans: 11</p>
	<p>Static and kinematic indeterminacy?</p> <p>Ans: 4 & 14</p>