
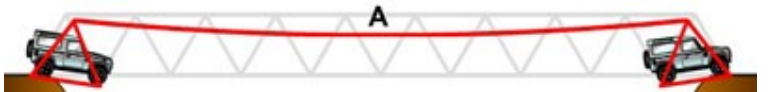




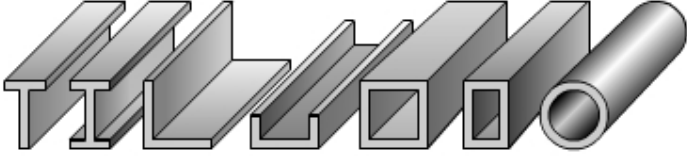


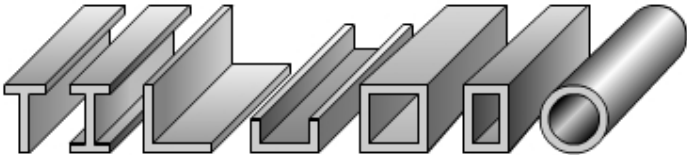


Truss Bridge Analysis Exercise

Write your answers in full sentences on a sheet of lined paper. Illustrate your answers with drawings similar to the ones shown below.

1.	Name the type of triangle utilised in the design of Warren Truss bridges	
2.	Is member "A" under tension or compression?	
3.	Is member "B" under tension or compression?	
4.	What type of triangle is utilised in the Pratt Truss bridge?	
5.	What should be added to the rectangle to make it rigid?	
6.	How many diagonal members are there in each rectangle in this Lattice Truss bridge structure?	
7.	Which structural section is least likely to trap water inside it, box section, pipe or rolled steel joist (RSJ)? Explain why.	
8.	Which would be the best way of joining rectangular box section steel members in this Lattice Truss bridge; soldering, brazing or welding? Explain why.	
9.	If a rolled steel joist (RSJ) had to be used in one place in the Lattice Truss bridge structure, where would be the best place to use it? Explain why.	
10.	Name the most commonly used method of preventing steel from rusting in bridge structures. Explain why.	
11.	All of the bridges shown in the drawings above utilise triangles in their design. Copy the sentence shown below and complete it by choosing the correct ending, either <i>a</i> or <i>b</i> . If the members that form each triangle are strong enough not to stretch or to bend under load and the joints between the members do not break under load then ... <i>a. the shape of the triangles cannot change</i> <i>b. the shape of the triangles can change.</i>	