

The JETS Challenge

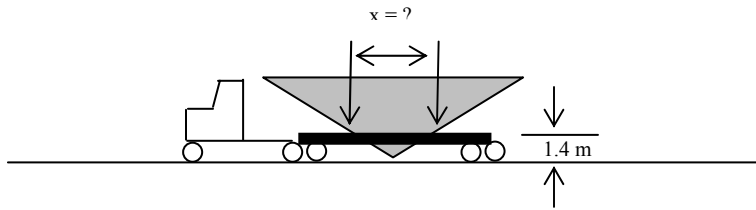
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Penn State University-Fayette

Challenge 51 – The Roof Truss Challenge

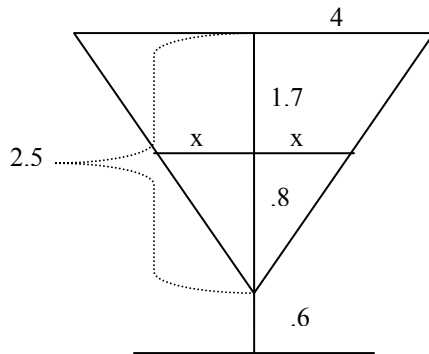
Problem:

Roof trusses (8 m long x 2.5 m high) are being hauled upside down on a stretch truck frame. A minimum of 0.6 m clearance to the ground is required.

How far apart (meters) are the lower support frames mounted 1.4 m above the ground?



Solution:



Similar Triangles:

$$\frac{4}{2.5} = \frac{x}{.8}$$

$$\frac{3.2}{2.5} = x$$

$$1.28m = x$$

$$\text{Answer} = 2x$$