BC Crane Safety
Crane Certification and Licensing Authority

SLING TENSION

To determine the load on each sling when using a two-leg bridle, the formula is:

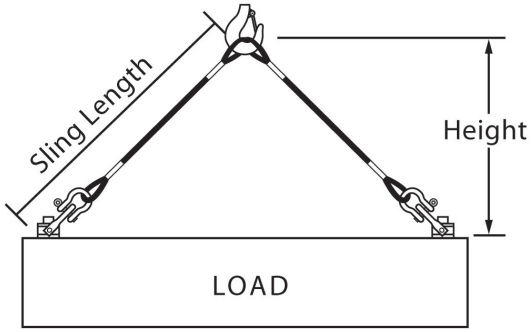
$$\frac{\text{load weight x sling length}}{\text{number of slings x height from load to hook}}$$

Note: The length of any hardware (e.g. shackles, turnbuckles) connecting the sling to the load will be included in the sling length.

Example 1:

What is the load in tons on each sling for a load rigged as in the figure below? Round off the answer to two decimal places.

Load Weight = 36 tons
Sling Length = 30 feet
Height from Load to Hook = 14 feet



Substitute the numbers into the formula:

$$\frac{\text{load weight x sling length}}{\text{number of slings x height from load to hook}}$$

$$= \frac{36 \times 30}{2 \times 14}$$

$$= \frac{1080}{28}$$

= 38.57 tons

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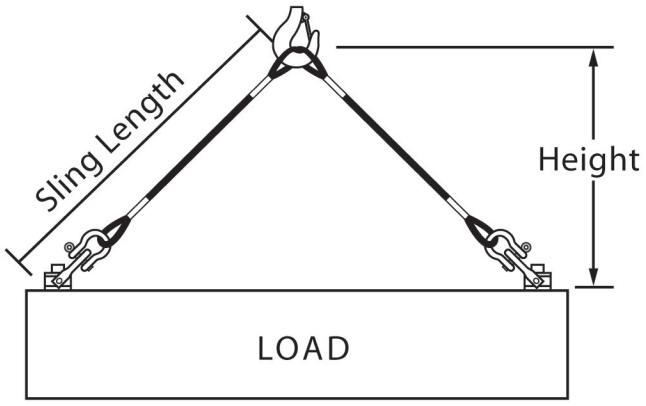
Practice Questions:

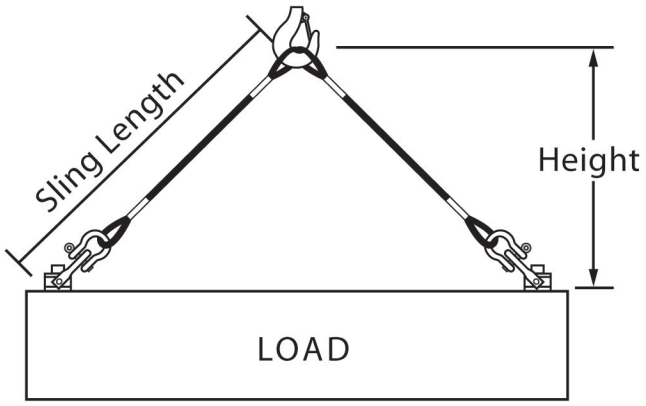
1. What is the load in tons on each sling for a load rigged as in the figure below?

Load Weight = 13,000 pounds **Sling Length = 25 feet** **Height from Load to Hook = 10 feet**



2. What is the load in tons on each sling for a load rigged as in the figure below? Round off the answer to two decimal places.

Load Weight = 40 tons **Sling Length = 42 feet** **Height from Load to Hook = 18 feet**



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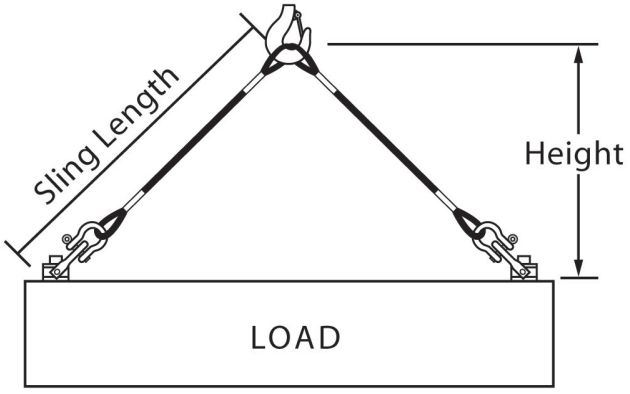
3. What is the load in tons on each sling for a load rigged as in the figure below? Round off the answer to two decimal places.

Load Weight = 4,762 kg
Sling Length = 5 m
Height from Load to Hook = 4 m



4. What is the load in tons on each sling for a load rigged as in the figure below?

Load Weight = 32 tonnes
Sling Length = 6 m
Height from Load to Hook = 3 m