Deck Gen - Seamanship - Block and Tackle

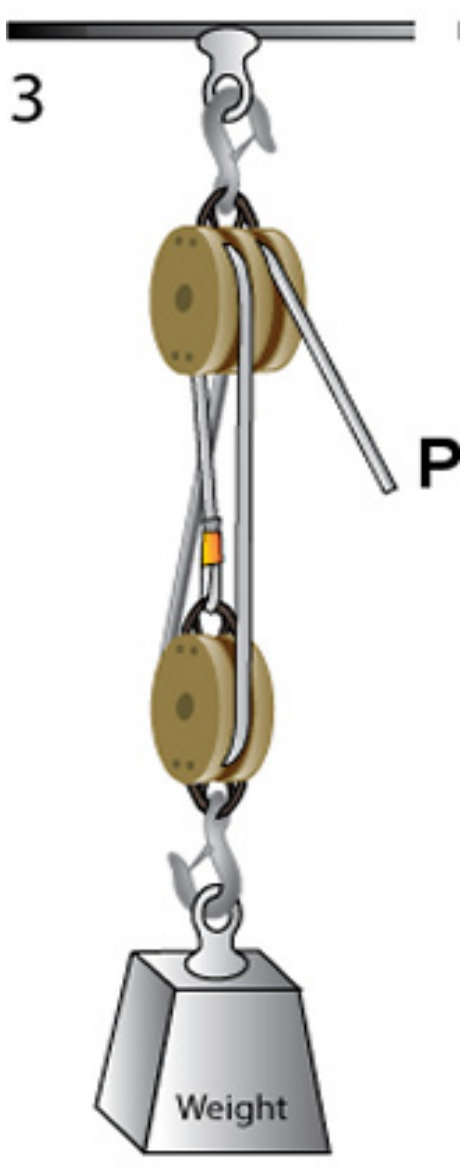
USCG Deck General Question 1646

You are using tackle number 3 as shown in illustration D029DG below to lift a weight of 120 lbs. If you include 10 percent of the weight for each sheave for friction, what is the pull on the hauling part required to lift the weight?

- 1 Read entire question. Clarify what is being requested.
- 2 Identify the correct Block & Tackle used in the problem. See the block and tackle general explanation (located in the drop down menu in the upper left corner of this explanation window) for a description of all twelve types.

"Single Luff" Rigged to Disadvantage, MA: 3 (3 Sheaves)

- 3 Solve using formula include 10% number of sheaves for friction



USCG Illustration D029DG Tackle #3

$$\text{Force} = \frac{\text{Wt. x 1.3}}{\text{MA}}$$

$$\text{Force} = \frac{\text{120lbs. x 1.3}}{3}$$

Force = 52lbs