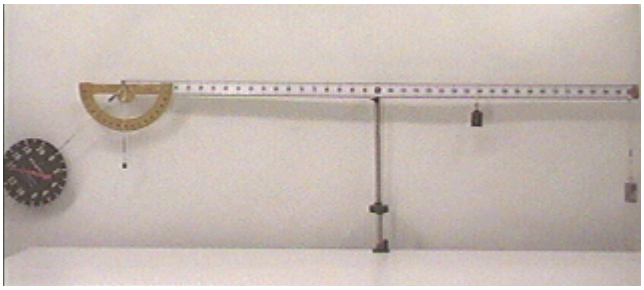
Answer #201

The answer is (a), as can be seen in the photograph below, where the mask has been removed from the spring scale.



A greater force is required when it is applied at an angle because only the component of force perpendicular to the beam is relevant in producing torque. Here the applied force is about 14 Newtons at an angle of about 45^{o}, so the downward component of this force is 14 Newtons x $\cos(45^{o})$ = 14 Newtons x 0.7, approximately 9.8 Newtons, close to the value of 10.5 Newtons required when pulling straight downward.

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For questions and comments regarding the *Question of the Week* contact
Dr. Richard E. Berg by e-mail or using phone number or regular mail address
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