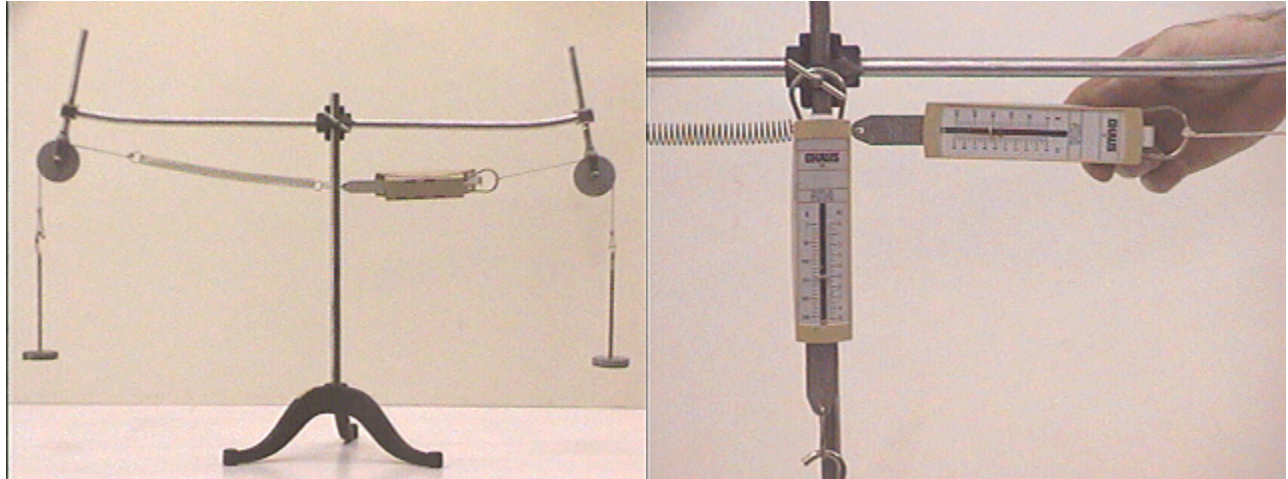


Answer #72

The answer is (b): the reading of the scale will be 150 grams, as seen by looking very carefully at the scales shown in the photograph below.



When the mass hangs on the spring scale it stretches the spring so that it reads 150 grams. The spring pulls back with the same 150-gram force. The top end of the spring scale must be supported by that same 150-gram force (plus the weight of the scale). In the situation here, the force that pulls back is the weight of the mass on the opposite end of the setup. It does not matter that the spring is there; according to the law of action and reaction the force acting on each end of the spring must be the same.

[Archive 4](#)

[Question of the Week](#)

[Outreach Index Page](#)

[Lecture-Demonstration Home Page](#)



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 given on the [Lecture-Demonstration Home Page](#).