The answer is (c): the final position of the weight hanger will be at 82 cm, as seen in the photograph at the right below.

The entire weight hangs on the series spring, causing it to extend by 8 cm, while that weight is divided between the two parallel springs, causing them to extend by only 4 cm each. This is a total extension of 12 cm, so the position of the weight hanger will be 82 cm.