The diagram below shows a sequence of events through which a box is launched by one spring, slowed down by friction, and brought to rest by another identical spring. At position A, the launching spring is compressed and ready for launch. At position B, the box is sliding. At position C, the box has just been stopped by the compression of the spring on the right. For both springs, K=60N/m. The mass of the block is 4kg.

    1. How much force is being applied to the spring in position A?
    2. What is the force of friction that is acting on the block?
    3. What is the velocity of the block at position B?

0m   0.4m   1.3m

2m   2.15m

1.8m