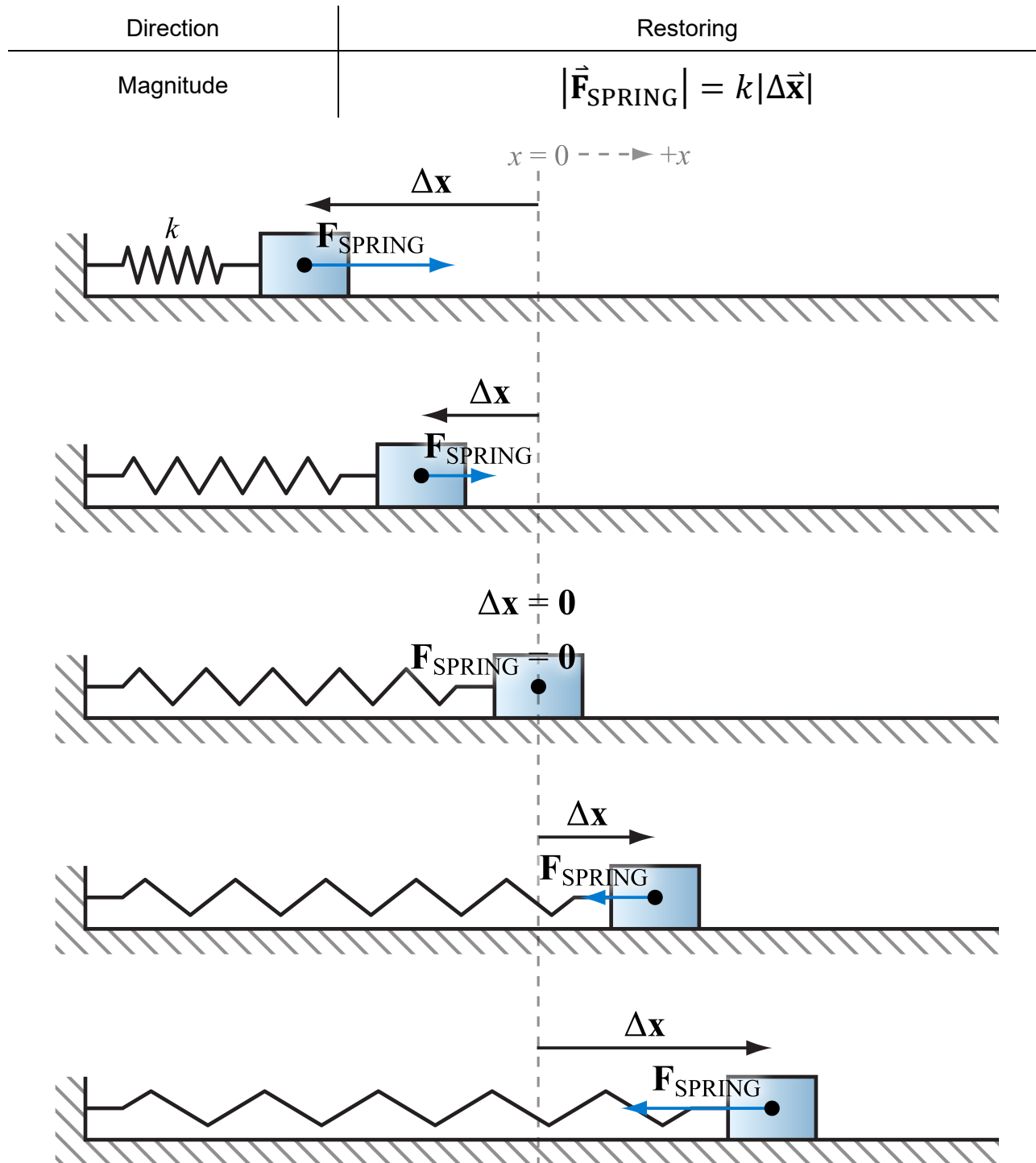


# Hooke's law



It is possible to write down an expression that provides both the direction and the magnitude of the spring force. However, there is a convention for labeling free-body diagrams and substituting quantities into Newton's 2<sup>nd</sup> law in which force labels stand for magnitudes and in which explicit positive and negative signs preceding force labels indicate directions. When using such a notational convention, the separate presentation of the direction and magnitude information in the table above is helpful.