up to the limit of proportionality

What does 'proportional' mean?
if you double the force, the extension doubles
the graph is a straight line through the origin

$$F = ke$$

Force
N

spring constant
N/m
N/cm

extension
m
cm

The spring constant is the stiffness of the spring - the greater k is, the harder the spring is to extend.

$$F = ke$$

$$k = F/e$$

Q6-7 P38

skip graph
bring to lesson