

Force Constant (k) of The Spring

$$f(x) = 27.007x + 0.2536$$

0.2536 is the y-intercept, but it should be zero. This is because when the displacement, x , is zero, the force, $f(x)$, should be zero. This value is error and is close enough to zero to be ignored.

$$f(x) = kx$$

$$f(x) = 27.007x$$

$$k = 27.007$$

k is also the slope ~~of~~ of the linear force v. displacement graph.