

using this site: http://chem.libretexts.org/Core/Physical_and_Theoretical_Chemistry/Quantum_Mechanics/02._Fundamental_Concepts_of_Quantum_Mechanics/De_Broglie_Wavelength

$$\mu = \sqrt{(3k_bT/m)} \quad (1)$$

```
> lambda = 2500
```

1 On Plank's Constant

https://en.wikipedia.org/wiki/Planck_constant

$\lambda/\text{\AA}$ is in the units of wavelenth per meter or meter/second/meter thus we are left with a time unit! Neat. I am not sure why they can tell us that! Whatever...

V_s/V so velocity of something over another velocity. Okay, this seems werid – what is the s?

Finally, the hint is anything but a real hint – basically driving more questions that it answers.

The equation given is

$$KE = EV_s \quad (2)$$

where KE is kenetic energy (units?) and E is the charge of an electron (volts) and V_s is velocity of ??.

We can use the photo-electric equation,

$$E = h\nu \quad (3)$$

```
> one=c(2536, 2830, 3039, 3302, 3663, 4358)
> two=c(2.6, 2.11, 1.81, 1.47, 1.1, .57)
> coef(lm(one~two))
```

```
(Intercept)      two
  4713.1565    -885.1904
```

```
> plot(one,two)
```

