

# Physics 341 - Lecture 31

Assignment 7 (due ~~not~~ Friday  
at 11:59 pm)

Q1:

$$y = 1789 + 0.7x$$

$\uparrow$   $\uparrow$   
y-intercept slope

(a)  $y = 1789 + 0.7(2445)$

(b)  $x \rightarrow x + 1$

$$y = 1789 + 0.7(x+1)$$
$$= (1789 + 0.7x) + 0.7$$

...  $y: + 0.7$

$$y = 4.7 - 0.016x$$

Q2.  $y = 4.7 - 0.016x$

$$\sigma = 0.085$$

$$\Delta x = 1 \quad \Delta y = -0.016$$

$$\Delta x = 6 \quad \Delta y = -0.016 \times 6$$

$\mu = \text{expected } y\text{-value.}$

$$y_{\text{low}} = 1.48$$

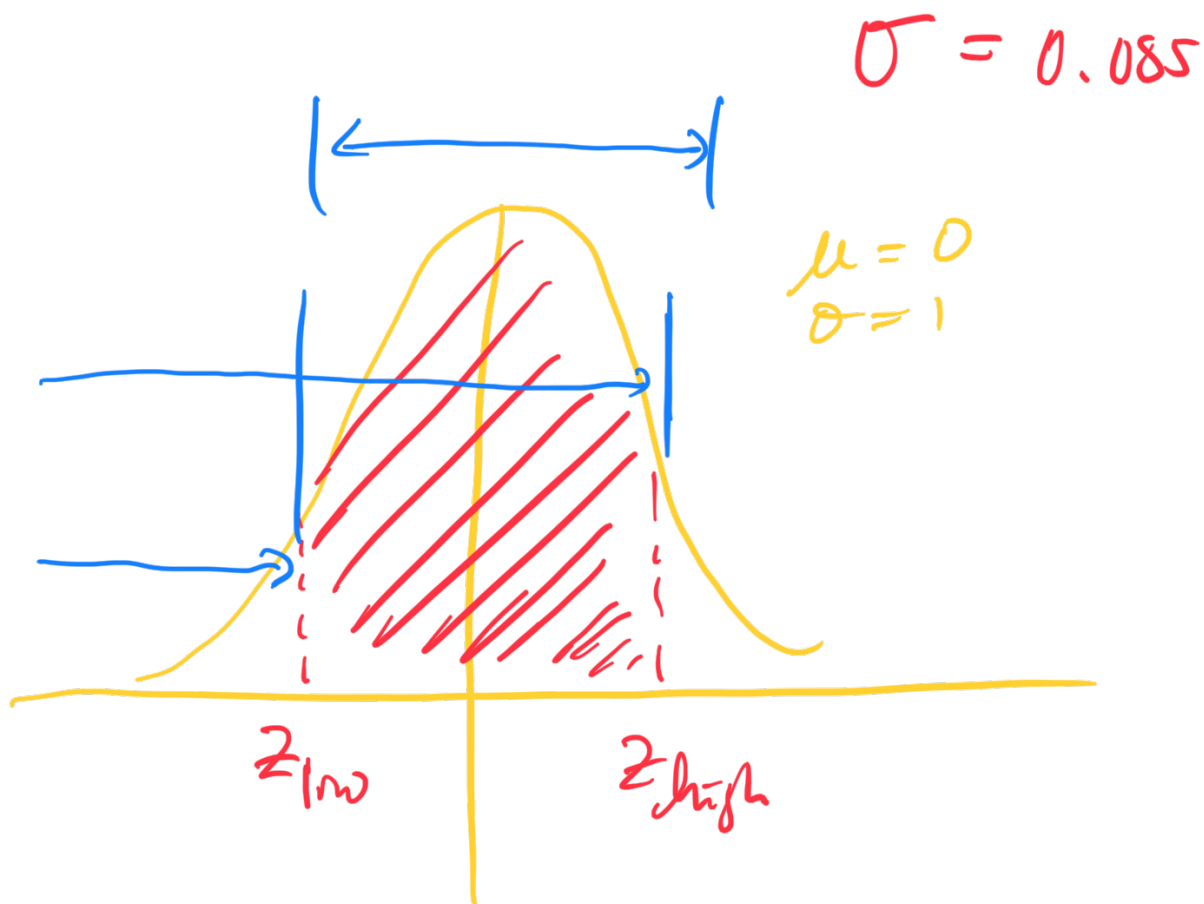
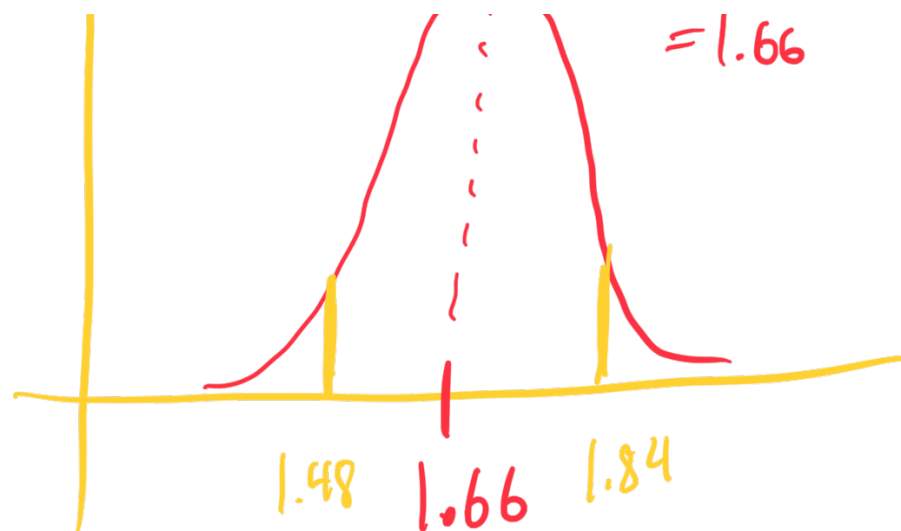
$$y_{\text{high}} = 1.84$$

|

$$T = 190$$

$$\mu = 190 \times -0.016 + 4.7$$

∩

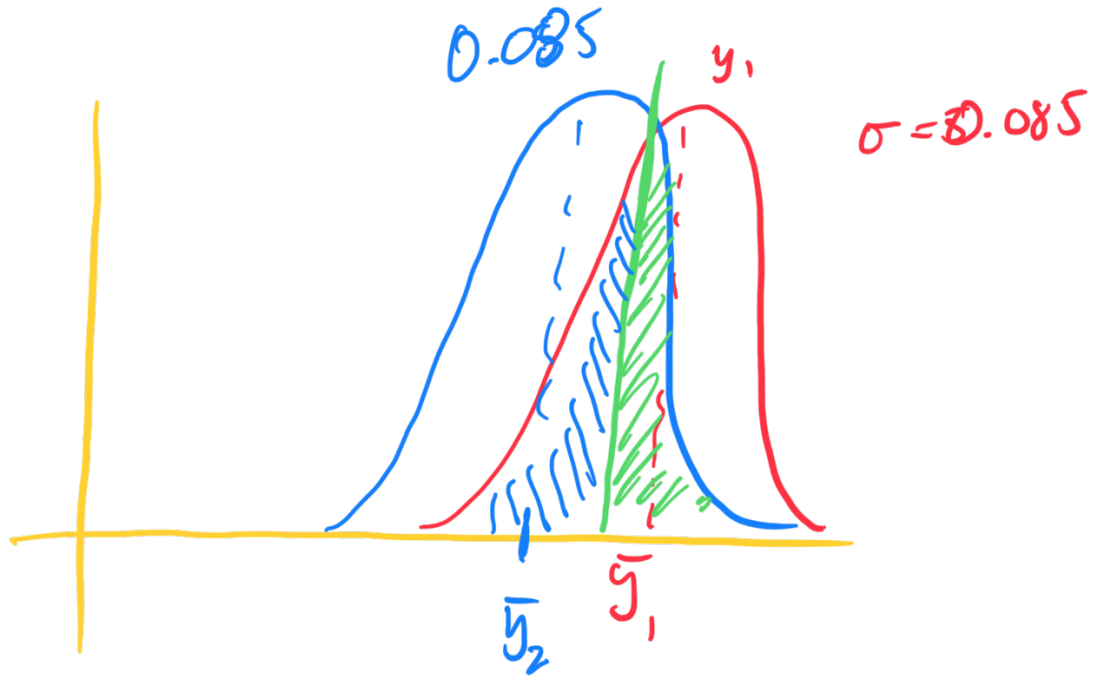


d)

$$\bar{y}_i = 4.7 - 0.016 x_i$$

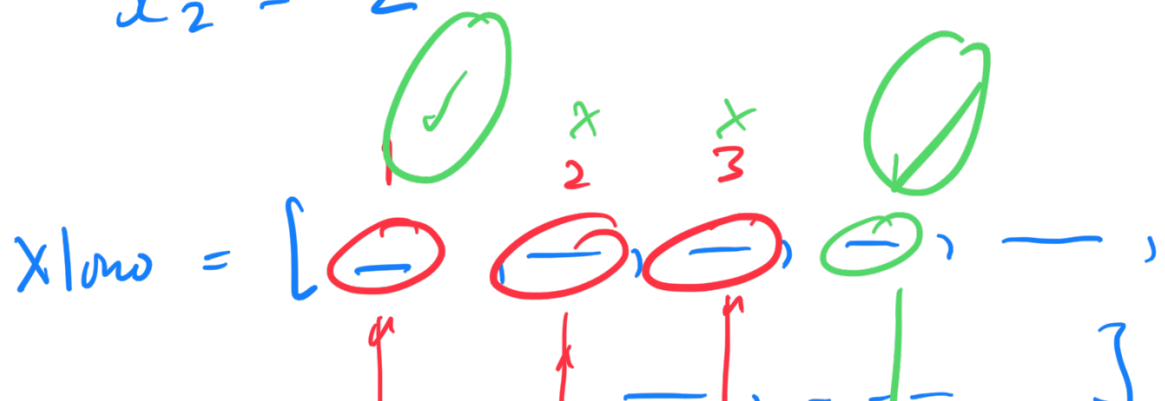
- n = 11

$$\begin{aligned}
 \bar{y}_2 &= 4.7 - 0.016x_2 \\
 &= 4.7 - 0.016(x_1 + 1) \\
 &= (4.7 - 0.016x_1) - 0.016 \\
 x_2 &= x_1 + 1 \quad \uparrow \\
 &\quad \bar{y}_1
 \end{aligned}$$



$$x_1 = 1$$

$$x_2 = 2$$





$$|0\rangle = \sqrt{M_S} |E_{\text{don}}\rangle$$