

Joe works 9-to-5 at the store for exactly one calendar month. He earns between \$800 and \$900.
 What is his average wage, with uncertainty?

min number of working days $N_{\min} = 20$

max " " " " $N_{\max} = 23$

	S	M	T	W	R	F	S
1	X	X	X	X	X	X	0
2	0	X	X	X	X	X	0
3	0	X	X	X	X	X	0
4	0	X	X	X	X	X	0
5	0	X	X	X			

Number of hours = $8 \times 20 = 160$

to $8 \times 23 = 184$ $N_h = 172 \pm 12$

Money earned = Cash = \$ 850 ± 50

Avg Wage is $W = \frac{850 \text{ dollar}}{172 \text{ hours}} = 4.94 \frac{\text{dollars}}{\text{hour}}$

$$\frac{\Delta W}{W} = \left(\frac{\Delta N_h}{N_h} \right) + \left(\frac{\Delta \text{Cash}}{\text{Cash}} \right) = \left(\frac{12}{172} \right) + \left(\frac{50}{850} \right) = 0.1286$$

$$\Delta W = 0.1286 \left(4.94 \frac{\text{dollars}}{\text{hour}} \right) = 0.636$$

\Rightarrow
 $W_{\text{avg}} = 4.94 \pm 0.63 \frac{\text{dollars}}{\text{hour}}$
 $= 4.9 \pm 0.6 \frac{\text{dollars}}{\text{hour}}$

 ← OK
 ← better