666

C 6e- $1s^2 2s^2 2p^2$

[He]

4 valence

Sublevel

2p 2 #e- in that sublevel

Energy level

Valence outermost P.E.L. 2nd level with e-

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P

15e-

[Ne] $3s^2 3p^3$

3s 3p

5 valence

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6.68 V 23e⁻

3 unpaired

2 valence

[Ar] $4s^2\ 3d^3$

$[1s^2\ 2s^2 2p^6\ 3s^2 3p^6]$

#lg+2o

↑↓ ↑ ↑ ↑ _ _

4s 3d

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4 Quantum Numbers

"Address" for each e⁻

n Principle energy level → PE

l azimuthal energy level → Sublevel

M Magnetic quantum # −l to +l

S Spin +½ ↑ ↓ −½

s p d f

0 1 2 3

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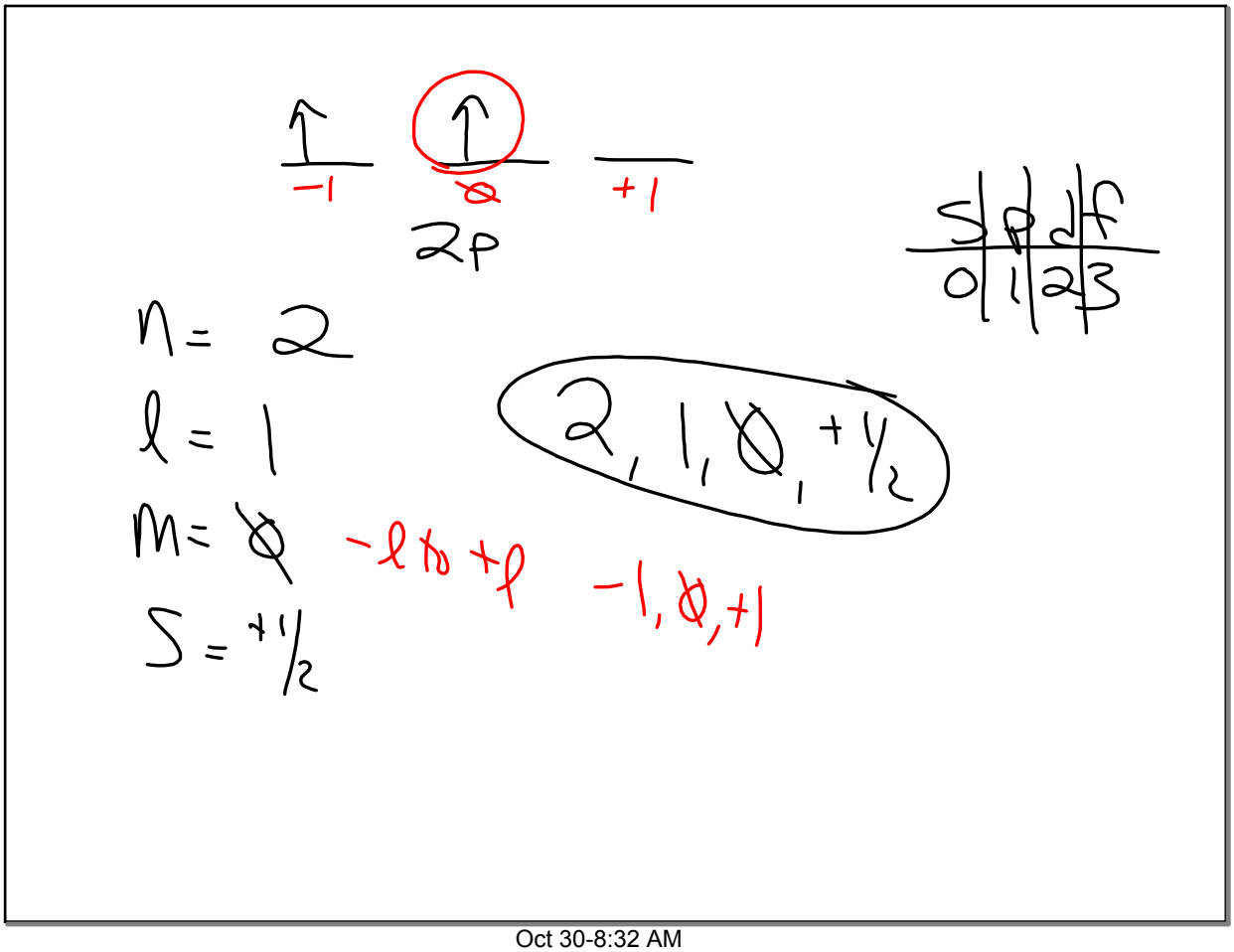

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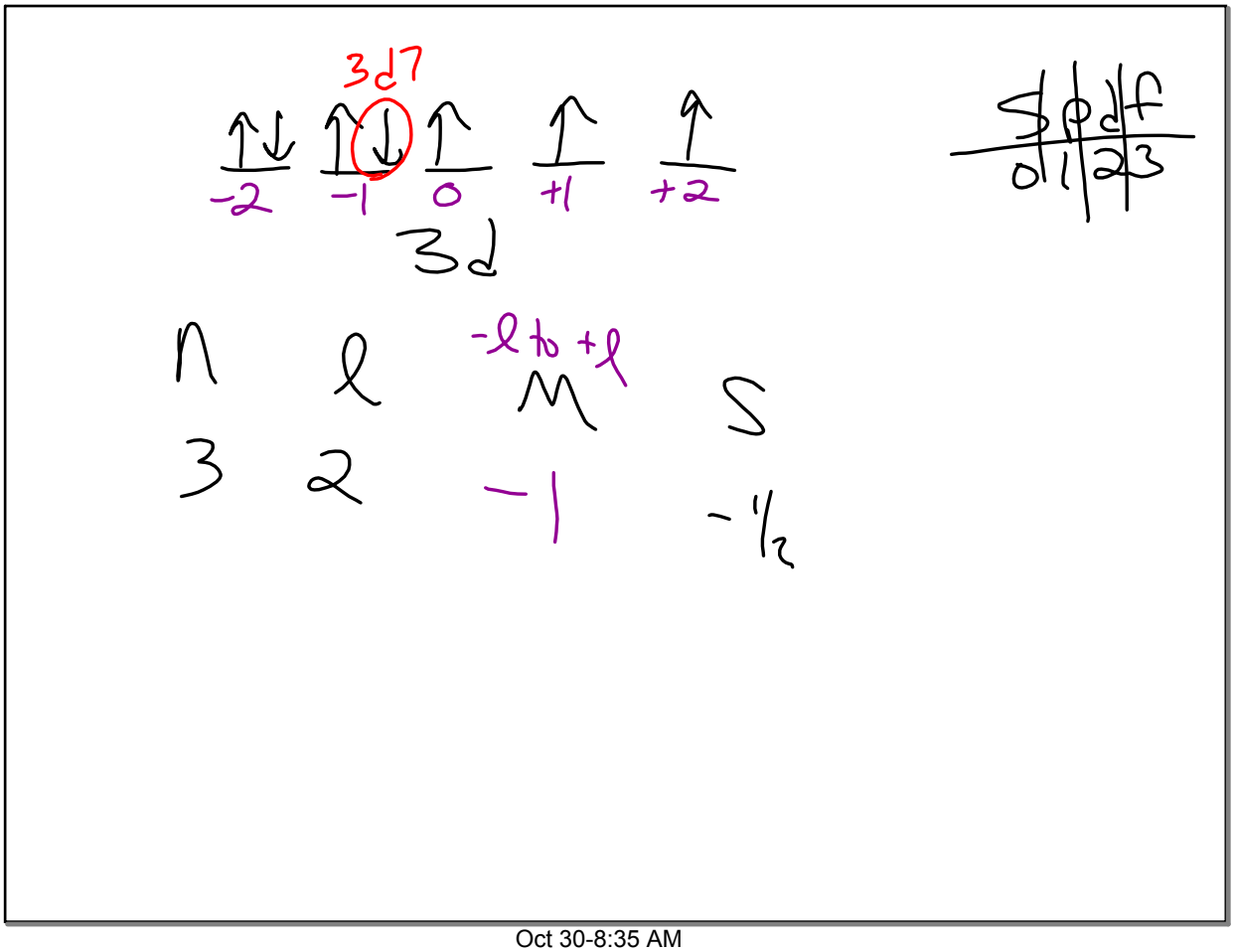

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possible

n l m s

2, 0, 0, -½

2 s

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n l m s

3 3 2 +½

3rd PE ... "f"

No 3f

$l \Rightarrow$ Max of $(n-1)$

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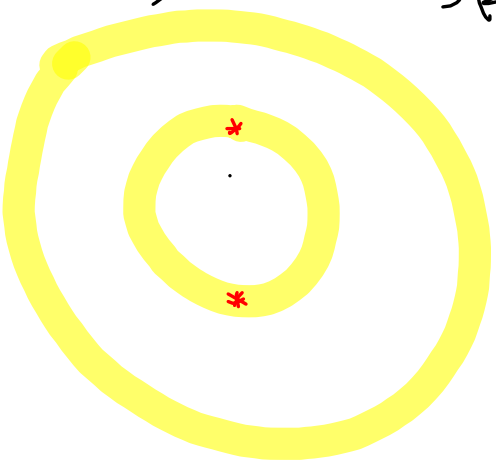
Heisenberg's Uncertainty Principle

location vs speed



only ~~1~~ ≠ at a time

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6.64

+ LAB

Oct 30-8:47 AM