

STATISTICAL MECHANICS



○ ○

C m

1. distinguishable

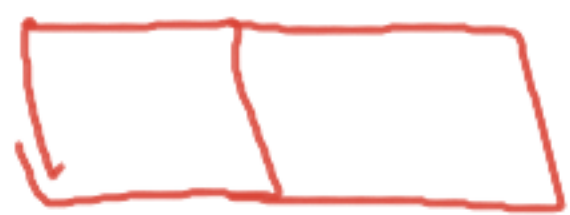
○/○
A B

Q. m

○○

1. indistinguishable

○○ A A	○○ B B
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00

$$FD = BE + PEP$$

① C m 00

A B



② Q m

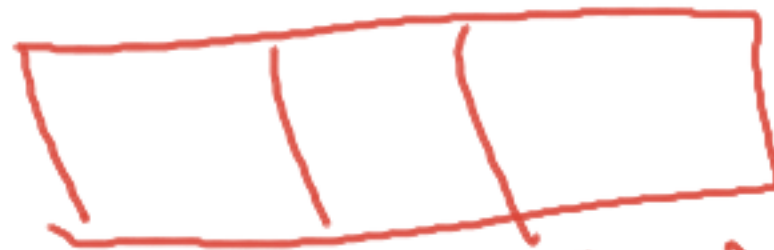
BE → 00
A A



FD 00
A A



000



→ MB → 27 → 3 - 27 ✓

→ BE → 6 9 10 ✓



→ FD → 1



30 Desk → 90
90 students





B-E \rightarrow (20) (24)

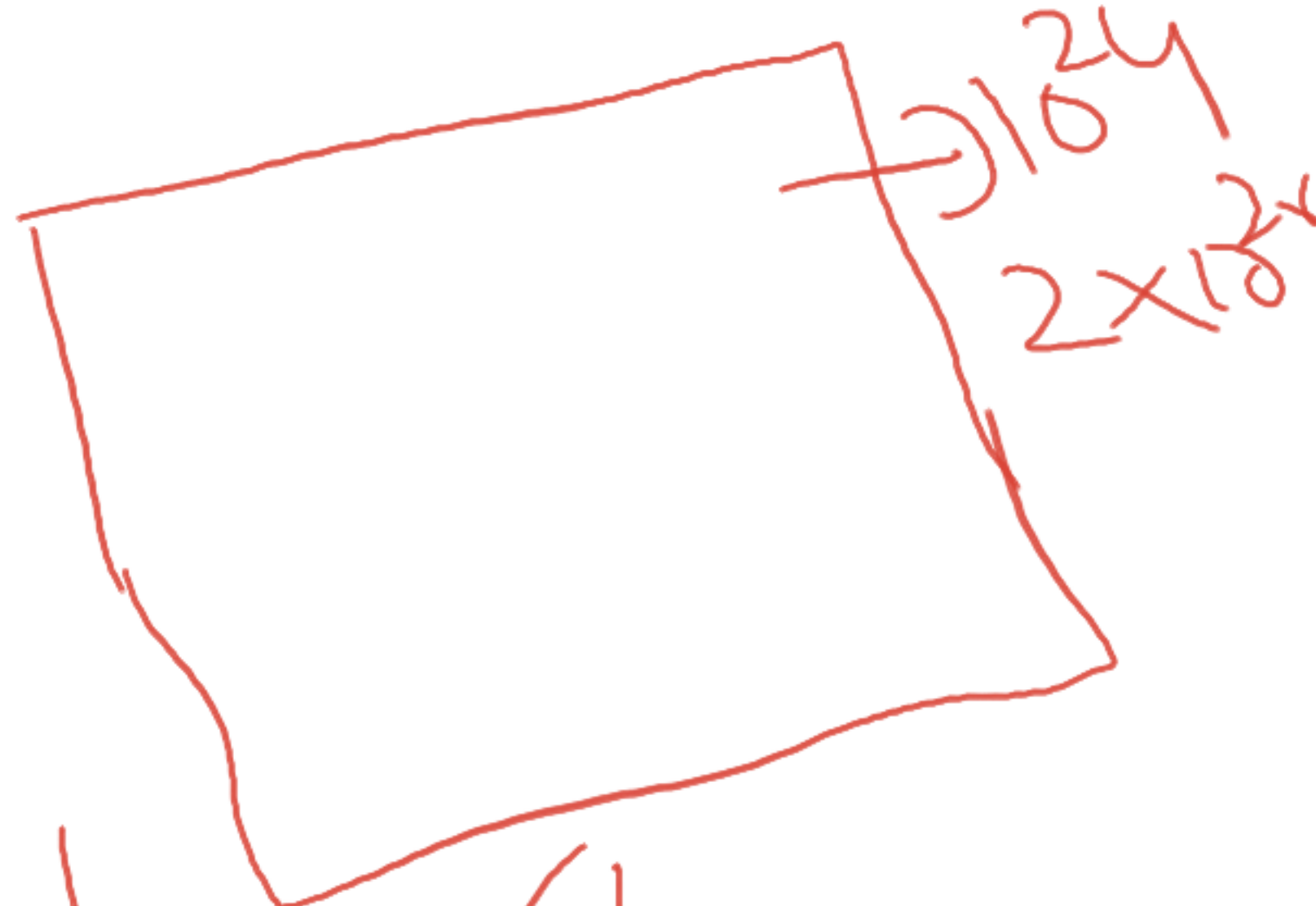
F-D \rightarrow (5) 90

~~$2 \times 3 \times 4 \times 5 \times 2$~~

~~2×3~~ $\Rightarrow 2 \times (3+3)!$

$3! \cdot 3!$

$\Rightarrow \frac{6!}{3! \cdot 3!}$



○ ○ ○ ○ ○ ○

n₁

$$\sum$$

1	4	3	4	5
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①

①
MR

②

MR

③

MR

1	2	3	4
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②

SS

BE

BE

BE

1	2	3	4	5	6
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③

FD

FD

FD

$$(S+1)!$$

$$(A_i + S_i - 1)!$$

$$(5+4)!$$

$$(S+3)!$$

$$1, 3!$$

$$n_i! (S_i - 1)!$$

$$\frac{(5+4)!}{5! 4!}$$



MB



3

BE

REFL



FD



10



1

90



90 90 90



64 256

20



1





...

$$\frac{2!}{1!1!} \quad \frac{2!}{2!}$$

$$\frac{1 \times 2}{1} \quad 1$$

$\begin{matrix} 2 & 1 \\ \nearrow & \searrow \\ (661) & 331 \end{matrix}$

most probable microstate
 $2 > 1$

