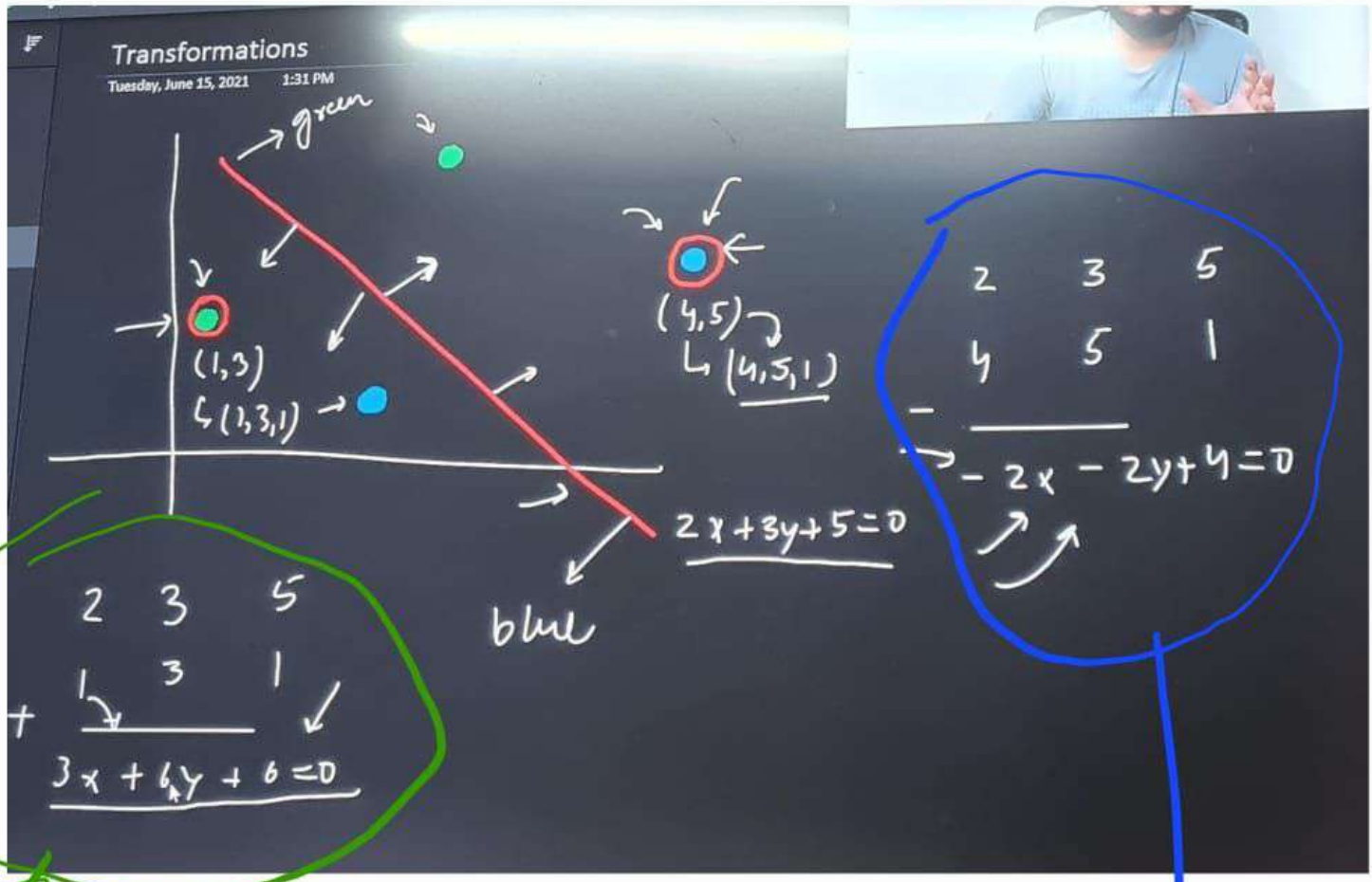
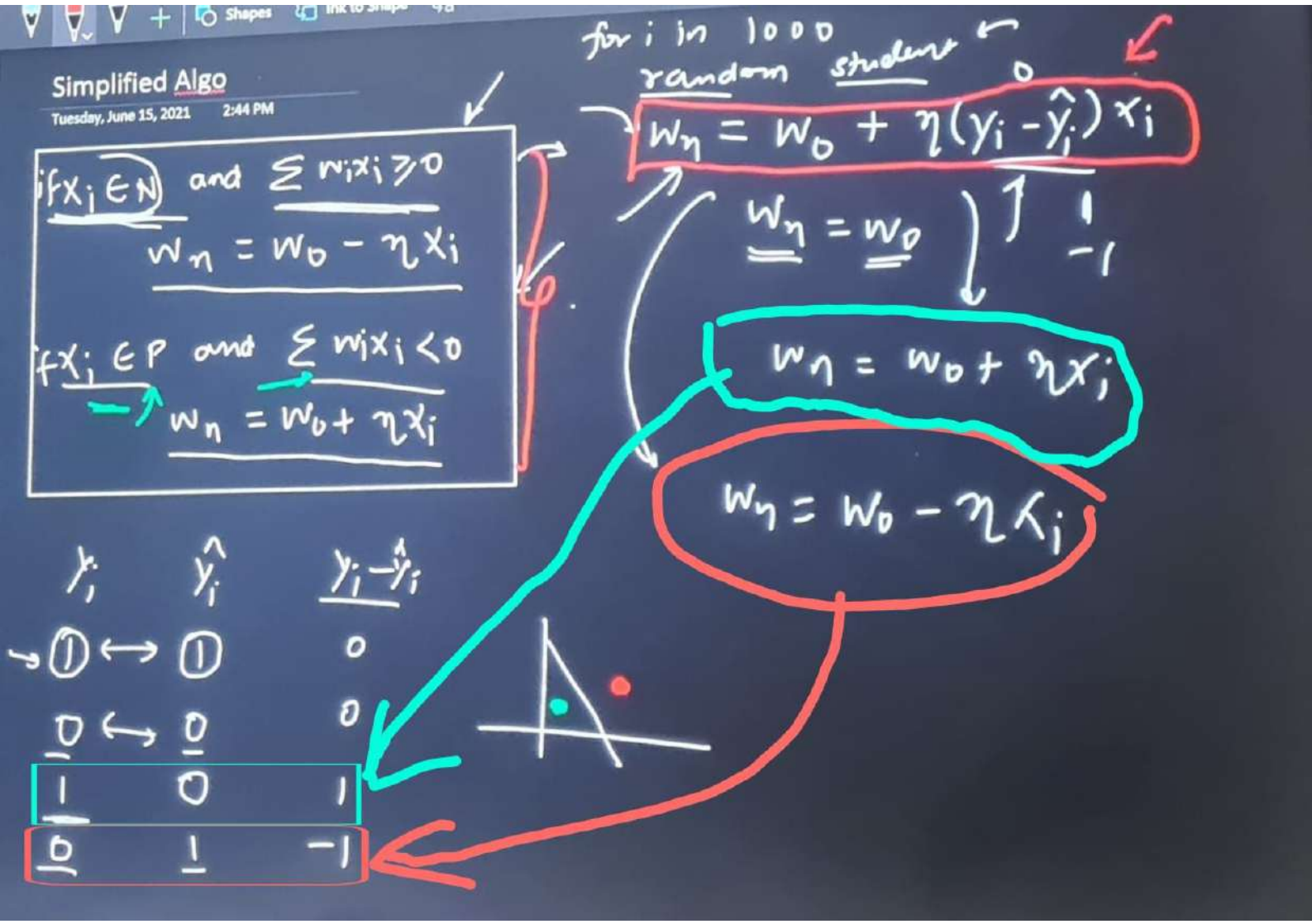


If a positive point (🟢) is on the negative region of the line
First add 1 to it's coordinates (1,3) to (1,3,1)
Then perform this calculation
Line coordinate + learning rate * point coordinate
then the new line is formed

Visa versa for Negative (🔵) point
Is on positive region
First add 1 to it's coordinates (1,3) to (1,3,1)
Then perform this calculation
Line coordinate - learning rate *point coordinate
then the new line is formed


Simplified Algo
Tuesday, June 15, 2021 2:44 PM
for i in 1000
random students
$w_n = w_0 + \eta(y_i - \hat{y}_i) x_i$
if $x_i \in N$ and $\sum w_i x_i \geq 0$
$w_n = w_0 - \eta x_i$
if $x_i \in P$ and $\sum w_i x_i < 0$
$w_n = w_0 + \eta x_i$
$w_n = w_0$
1
-1
$w_n = w_0 + \eta x_i$
$w_n = w_0 - \eta x_i$
y_i $\hat{y}_i$ $y_i - \hat{y}_i$
1 ↔ 1 0
0 ↔ 0 0
1 0 1
0 1 -1