

# WELCOME

TO **Adda247**

*"If you can think, you can  
Achieve"  
So start thinking..*

*Renu Raj Garg  
M.Tech (VLSI Design)  
13 Year of Teaching  
Experience  
Worked 10 Year in NTRO*



# GATE 2024



प्रचण्ड Batch

Free

## COMMUNICATION

## DPCM & DM

TIME- 9:00PM

RENU SIR





Chapter-2

Digital Communications

*In today's lecture we will cover the following Topics :*

1. DPCM & DM





**SUBSCRIBE NOW**

**Gate Adda247**  
YouTube Channel

# GATE 2023 RESULT



**Congratulations**  
**FROM ADDA 247 FAMILY**

<b>AIR</b> <b>03</b> <b>ME</b> KUSHAGRA DUTT	<b>AIR</b> <b>05</b> <b>PI</b> HARSHIT KUMAR	<b>AIR</b> <b>07</b> <b>ME</b> RUSHI PRADIPKUMAR KARIYA	<b>AIR</b> <b>11</b> <b>CE</b> VINEET JAIN	<b>AIR</b> <b>30</b> <b>CE</b> RITIK BANSAL	<b>AIR</b> <b>36</b> <b>ECE</b> SUMIT KUMAR
<b>AIR</b> <b>64</b> <b>CE</b> UTKARSH MISHRA	<b>AIR</b> <b>71</b> <b>EE</b> SONESH SANJAY PAKAR	<b>AIR</b> <b>76</b> <b>CE</b> BIPANKAR DAS	<b>AIR</b> <b>87</b> <b>EC</b> SURAJIT RABI DAS	<b>AIR</b> <b>91</b> <b>EE</b> RISHABH GUPTA	<b>AIR</b> <b>111</b> <b>ES</b> ANIL GUPTA
<b>AIR</b> <b>130</b> <b>EE</b> SAURAV PATEL	<b>AIR</b> <b>136</b> <b>CE</b> RUPESH SACHDEVA	<b>AIR</b> <b>200</b> <b>ECE</b> WASUZZAMA	<b>AIR</b> <b>212</b> <b>IN</b> WASUZZAMA	<b>AIR</b> <b>217</b> <b>ME</b> VISHAL KUMAR	<b>AIR</b> <b>219</b> <b>ME</b> NITISH KUMAR
<b>AIR</b> <b>258</b> <b>EE</b> MANAV	<b>AIR</b> <b>348</b> <b>EE</b> AMAN NAMDEV	<b>AIR</b> <b>392</b> <b>EE</b> GAURAV MAHAJAN	<b>AIR</b> <b>403</b> <b>EC</b> MOHAN KUMAR SINGH	<b>AIR</b> <b>567</b> <b>EE</b> SHANKAR JHA	<b>AIR</b> <b>571</b> <b>ME</b> VLENDER MEENA





GATE

\*\*\*\*\*

Know How You Can



Ask Your Doubts 24x7.

Direct interaction with Adda247 Faculty team

**No Subscription Required**



Use Code Y505 | Communications for GATE 2024

Adda247

BILINGUAL

# PRACHAND BATCH FREE FOR ALL

ELECTRICAL,  
ELECTRONICS COMMUNICATION ENGINEERING

GATE 2024 & ALL PSU's



Start Apr 11, 2023

7:30 AM to 11:30 PM

Free

0 Rs.



# You Tube Classes Schedule

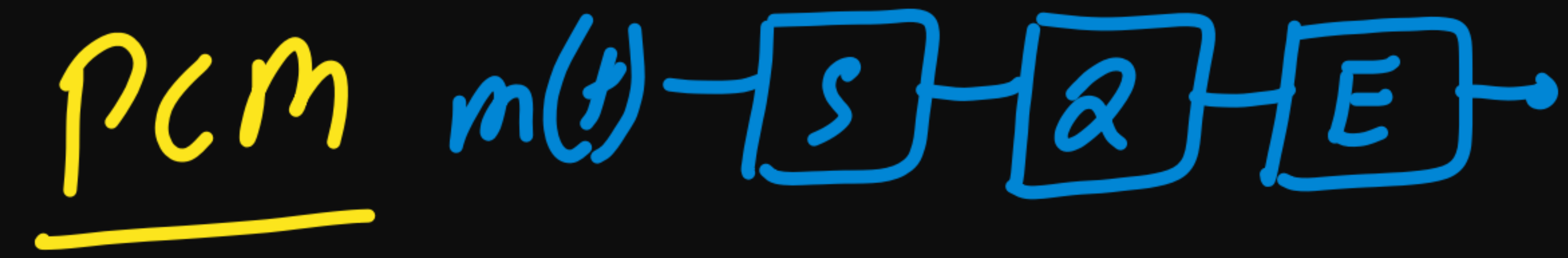
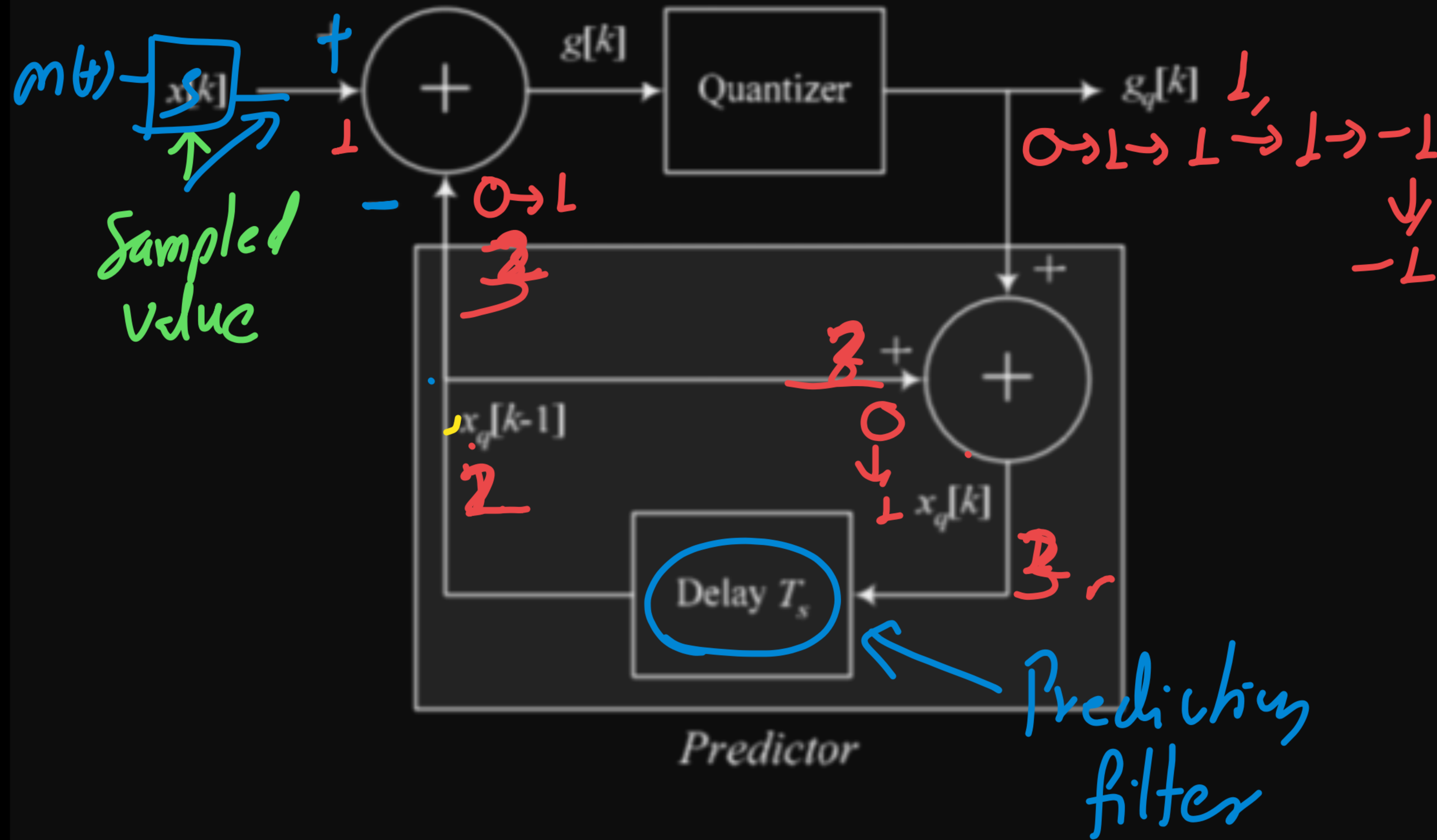


## EE & EC ENGINEERING

EXAM TARGET	SUBJECT	TIME	FACULTY
ALL PSUs	ENGINEERING MATHS	11:00 AM	ANANT SIR
GATE 2024-25	NETWORK THEORY	6:00 PM	RAVI SIR
GATE 2024-25	ELECTRICAL MACHINE	7:30 PM	SANTAN SIR
GATE 2024-25	COMMUNICATION	9:00 PM	RENU SIR



Differential PCM (DPCM):



$$R_b = n f_s \rightarrow (BW)_T \Big|_{min} = \frac{R_b}{2}$$

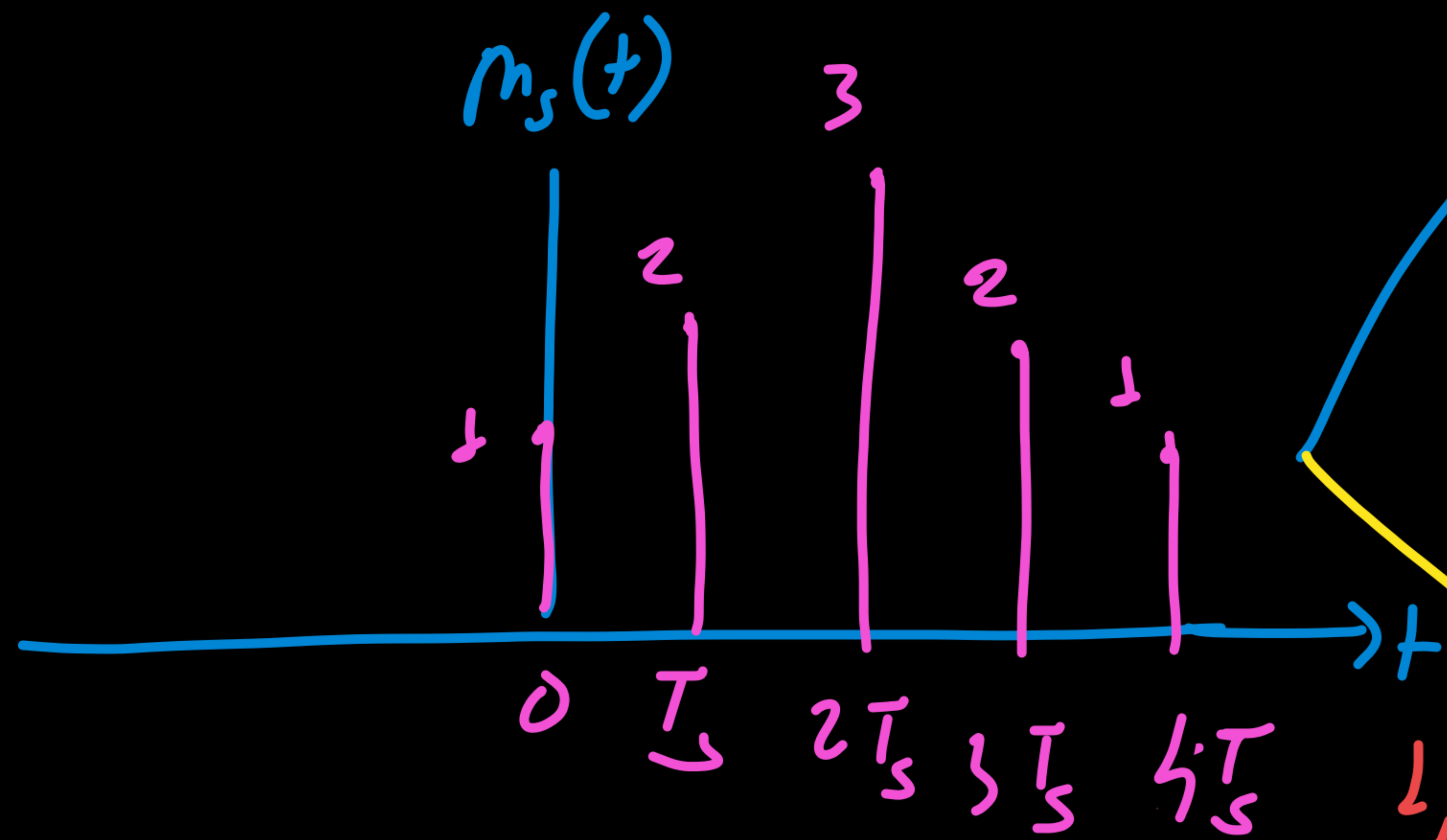
$$Q_e \Big|_{max} = \pm \frac{\Delta}{2}$$

$$\Delta = \frac{V_{max} - V_{min}}{L} = \frac{DR}{L}$$

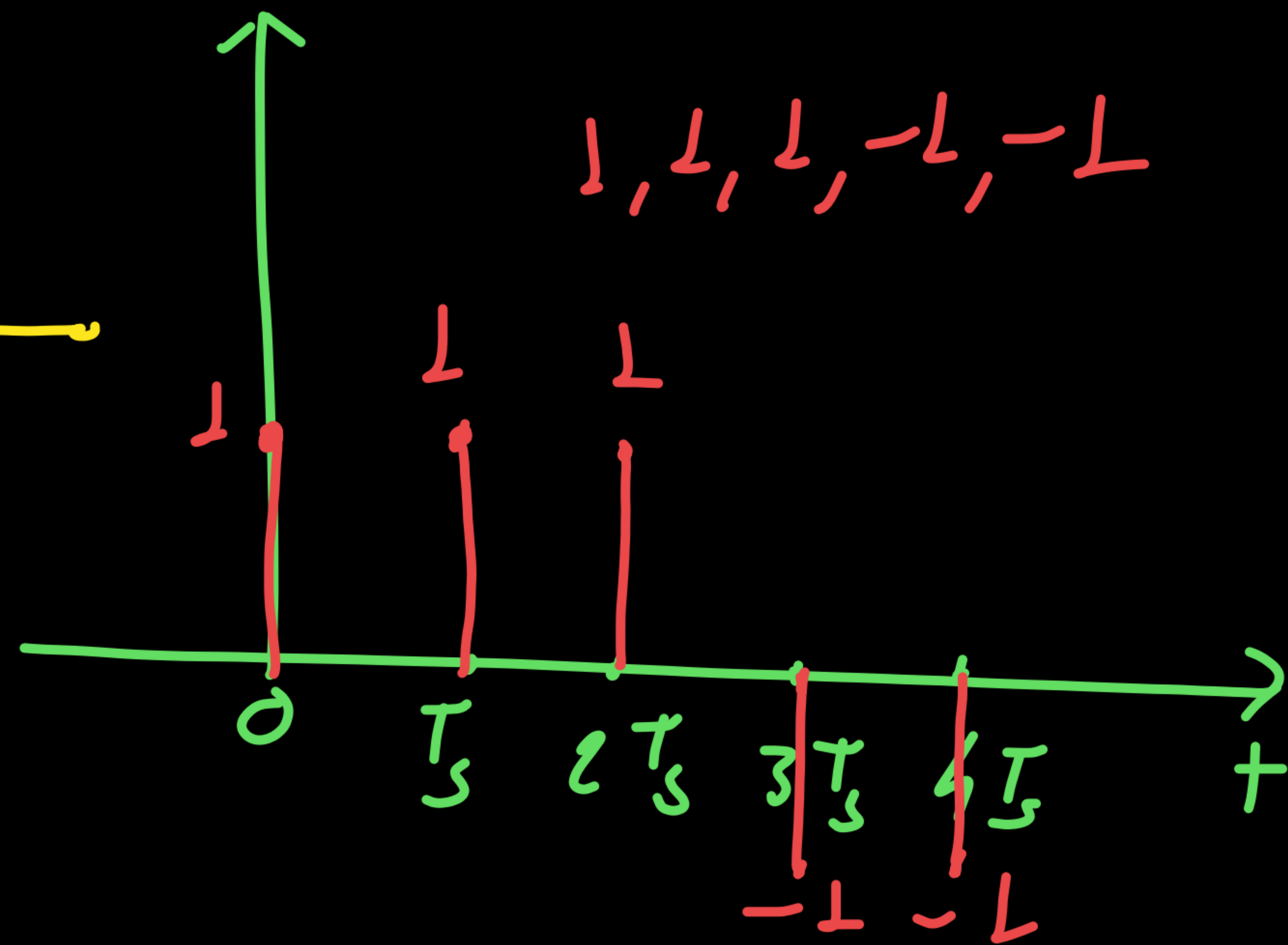
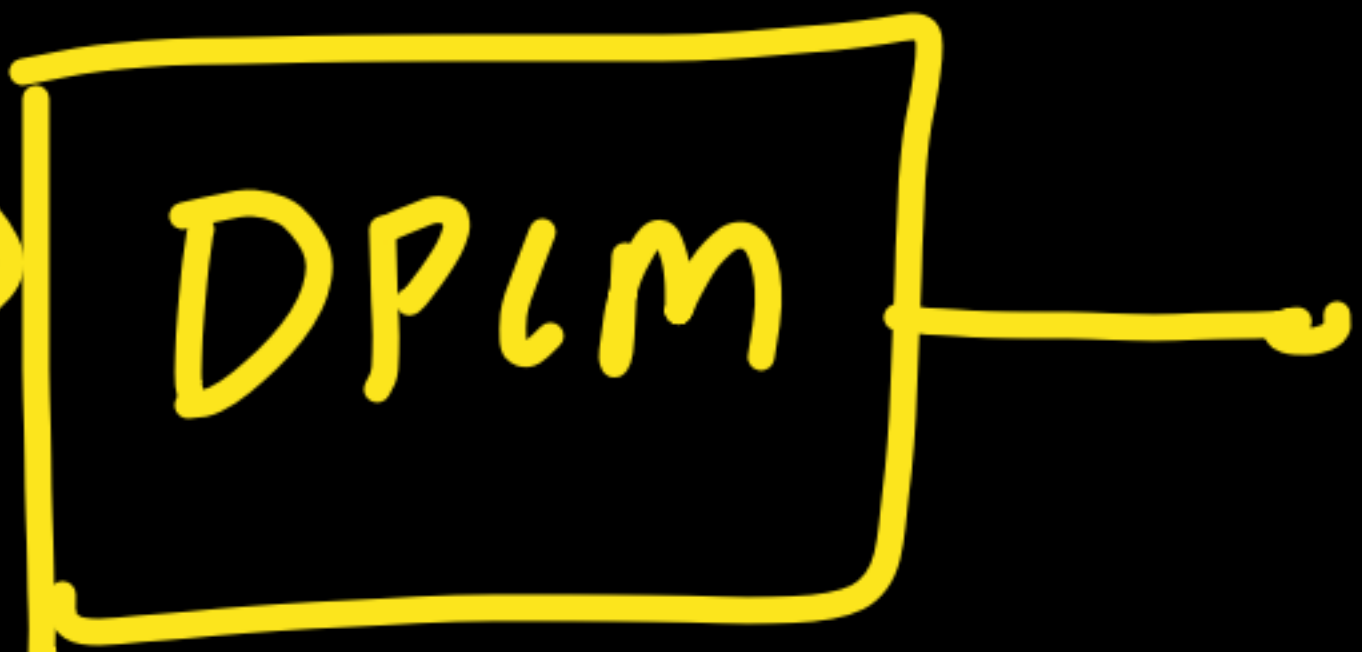
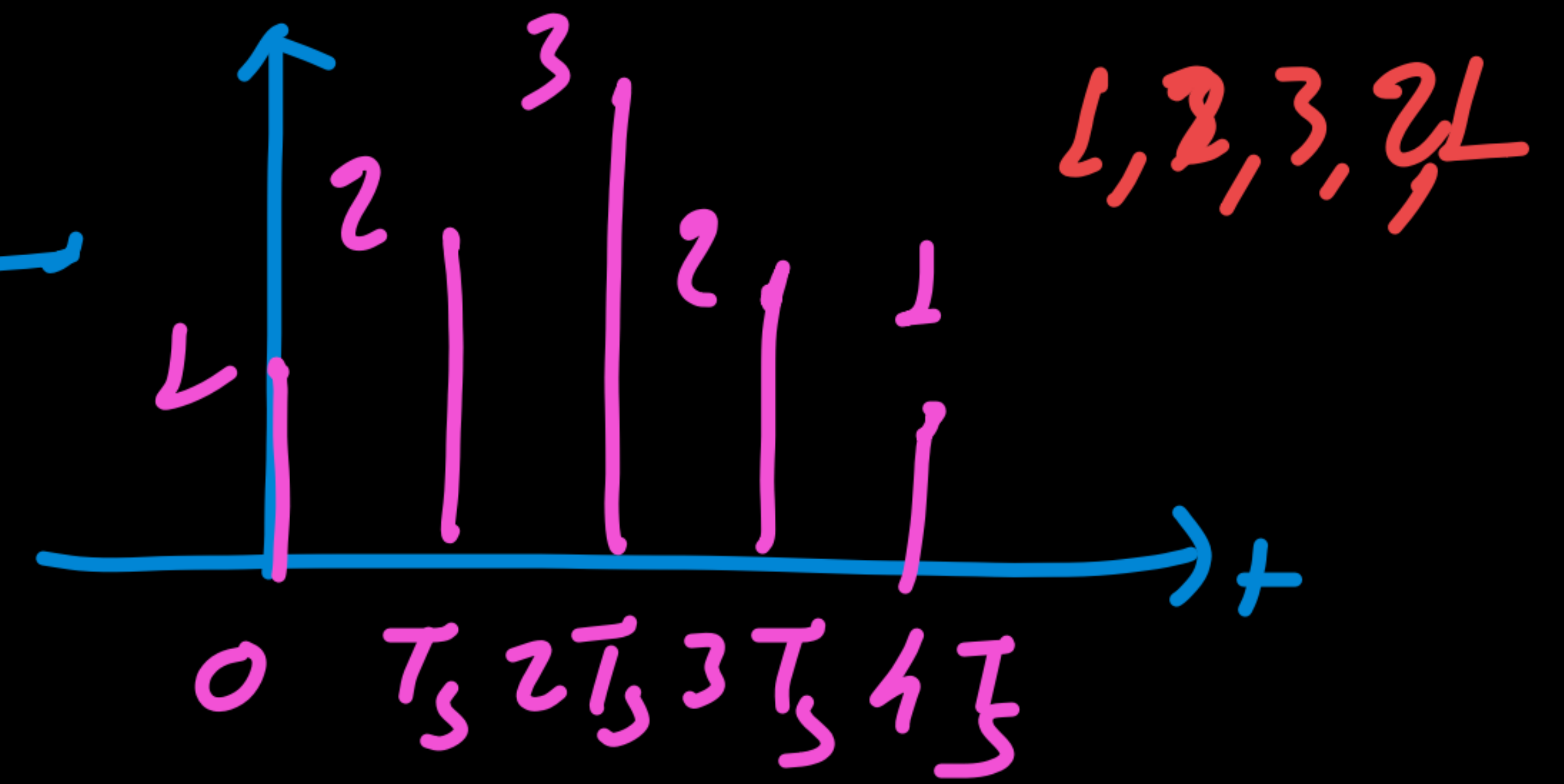
$$L \leq 2^n$$



Sampled value



1, 2, 3, 2, 1

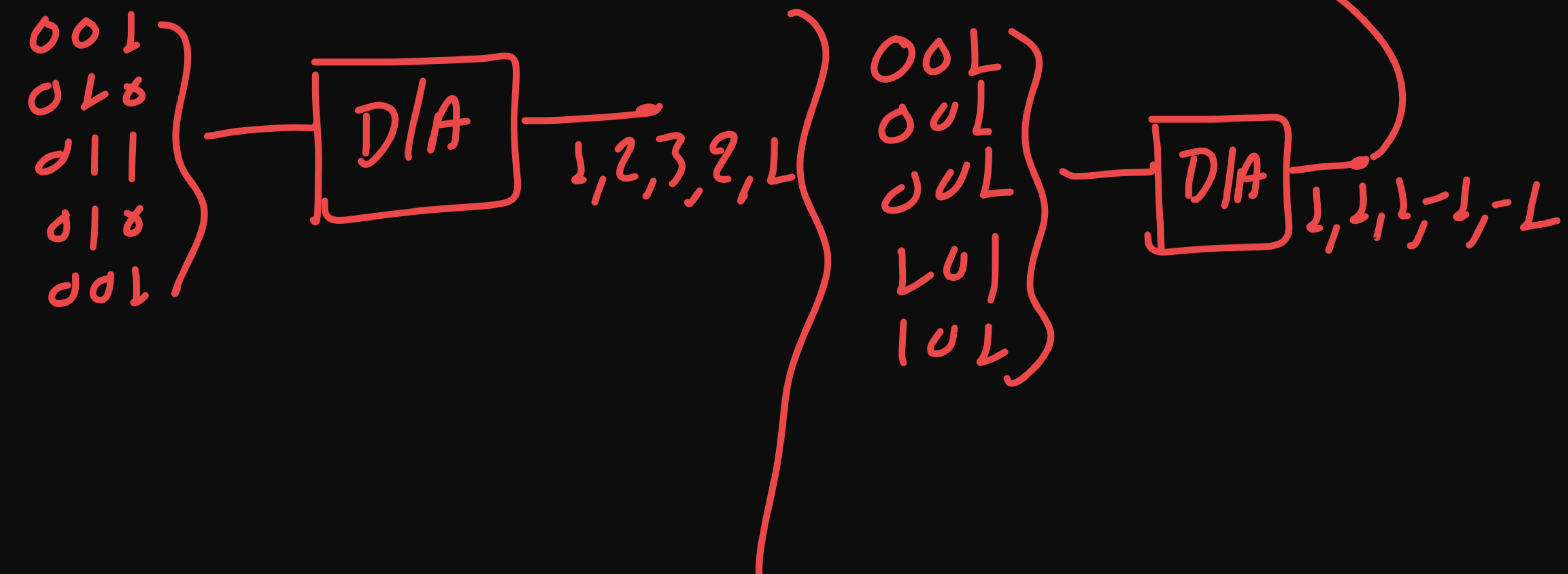
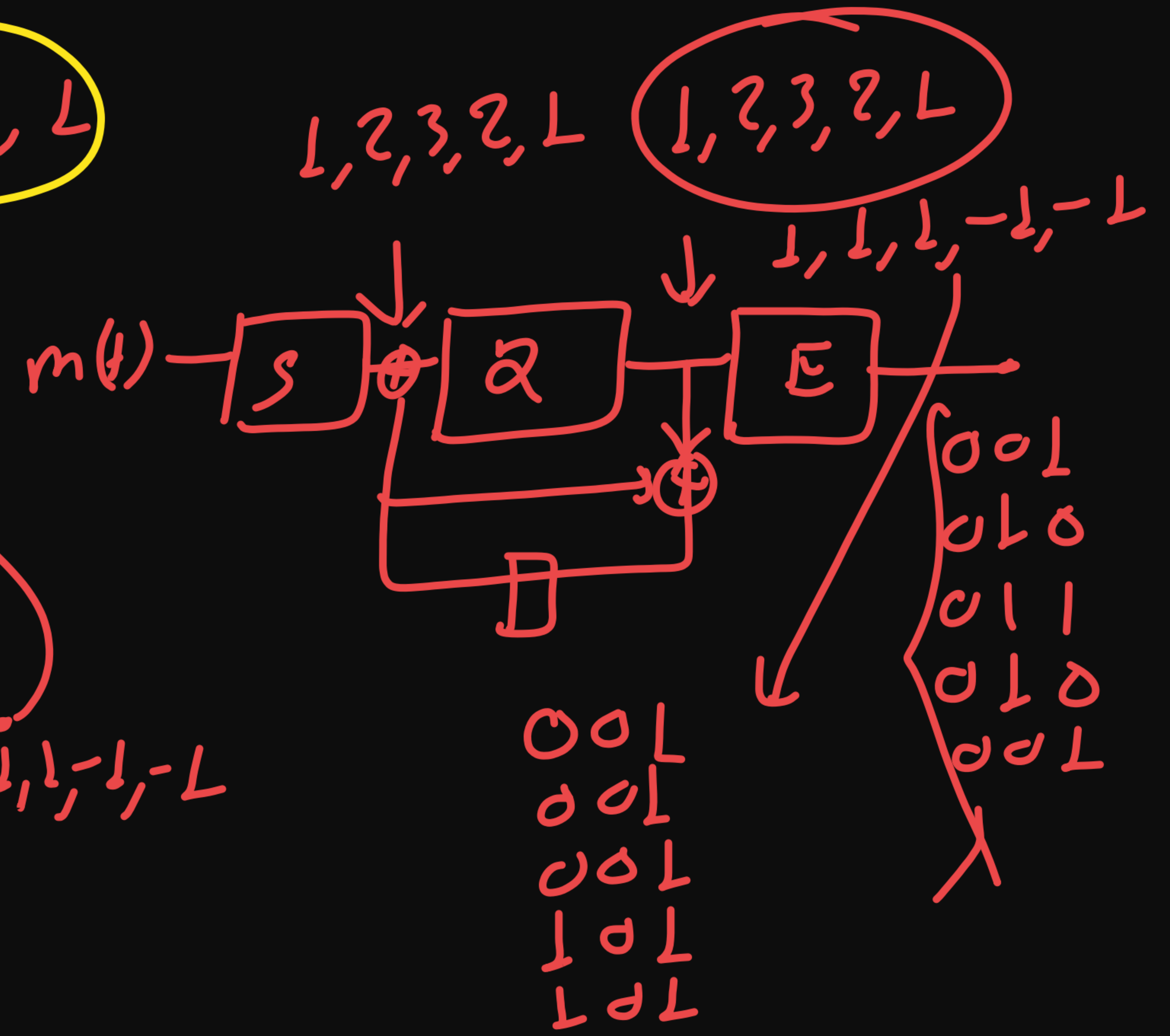


\* In PCM & DPCM  $\rightarrow$  no. of bits are same.

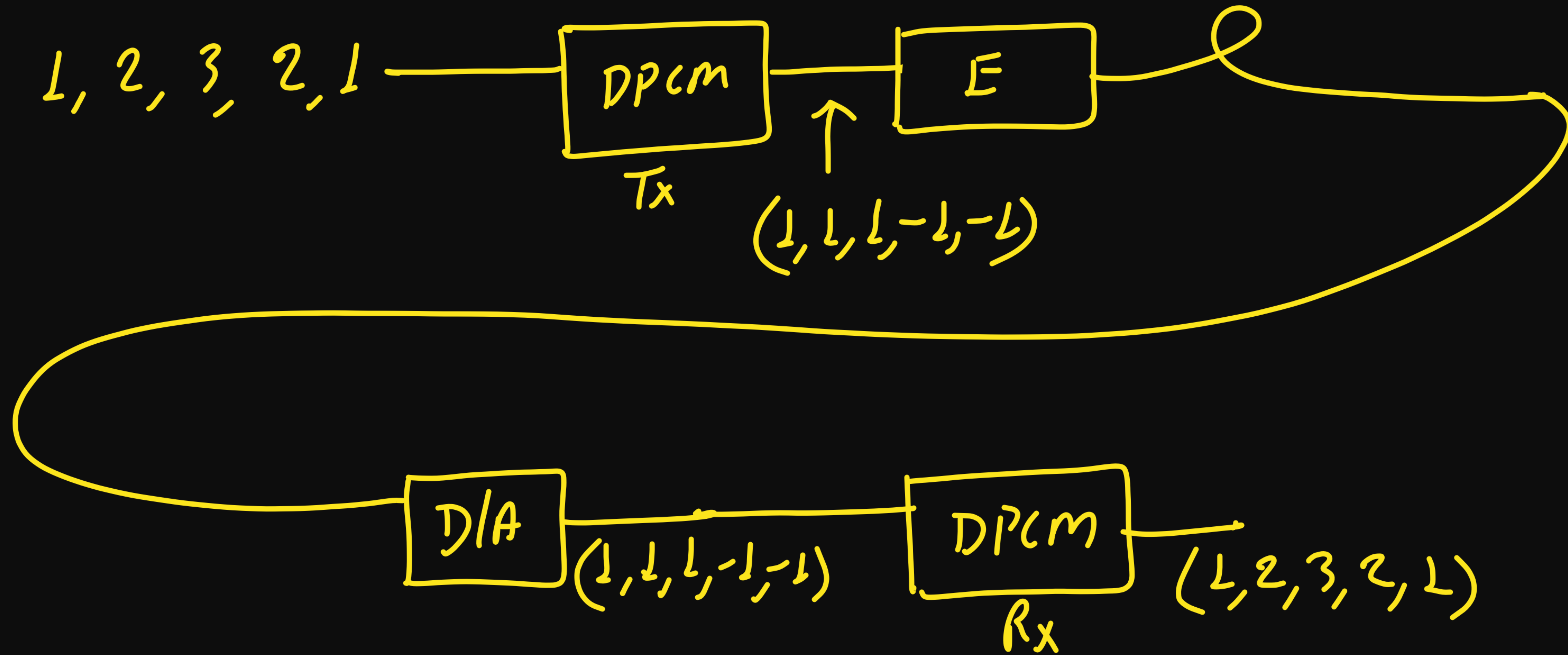
$R_b$  is also same,  $(BW)_T$  is also same

\*  $Q_e$  is reduced in DPCM w.r.t. PCM

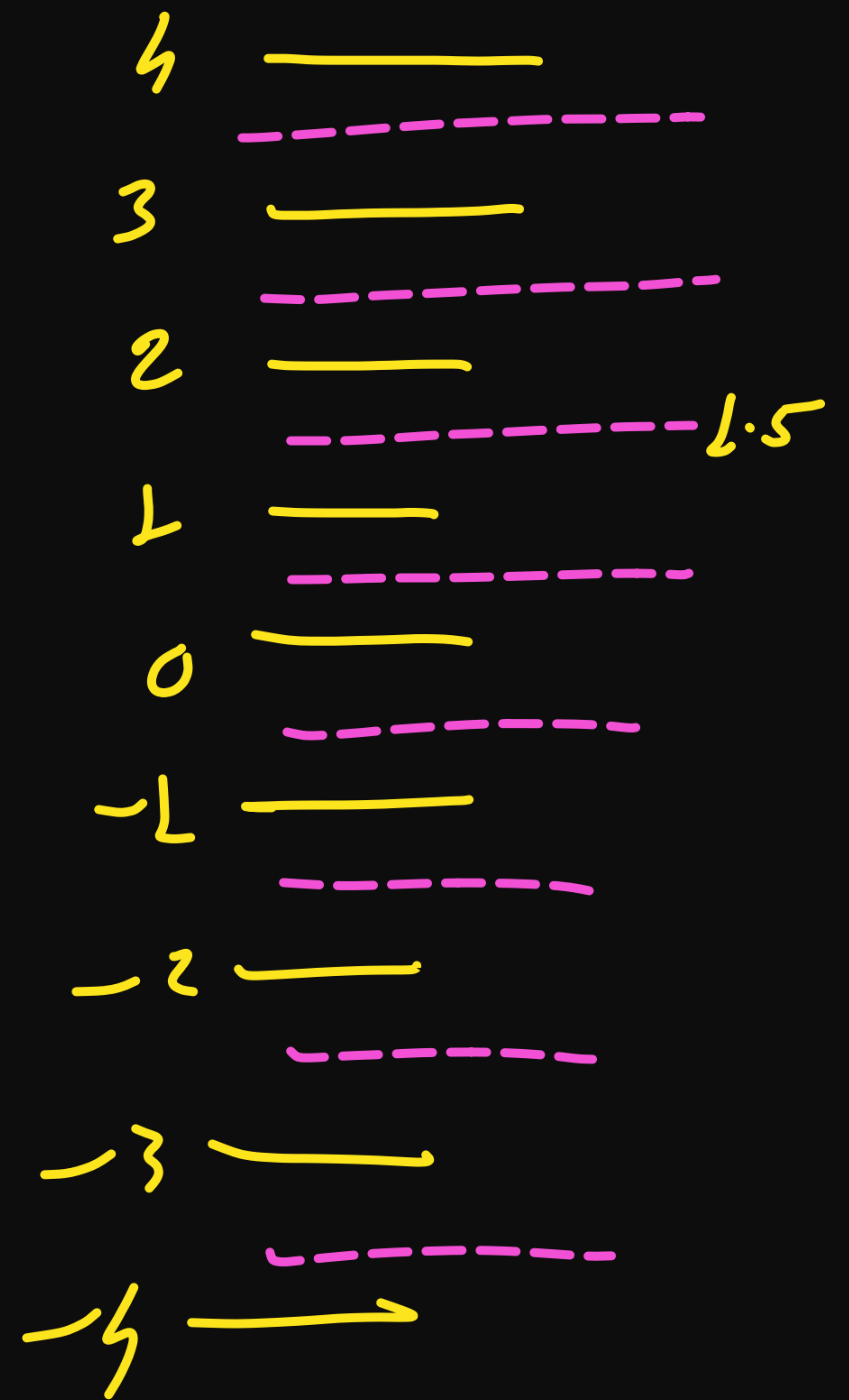
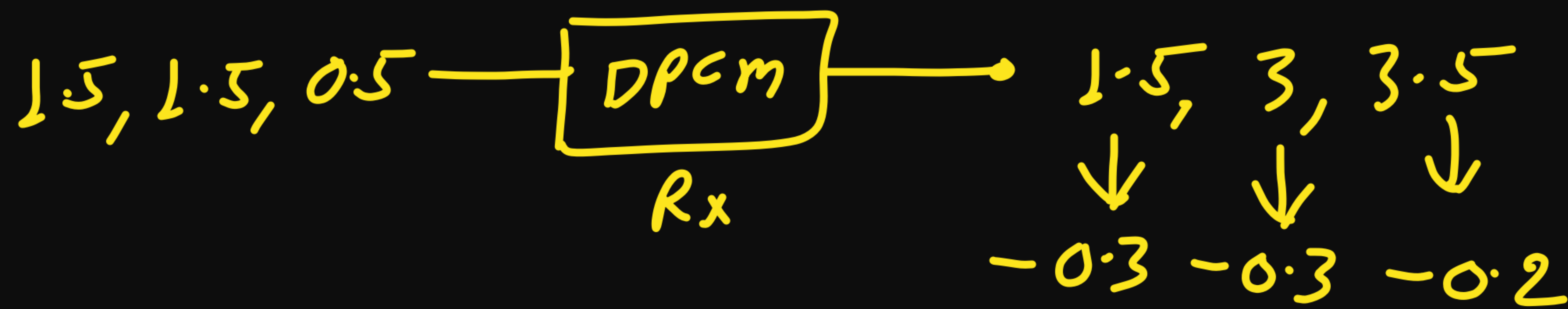
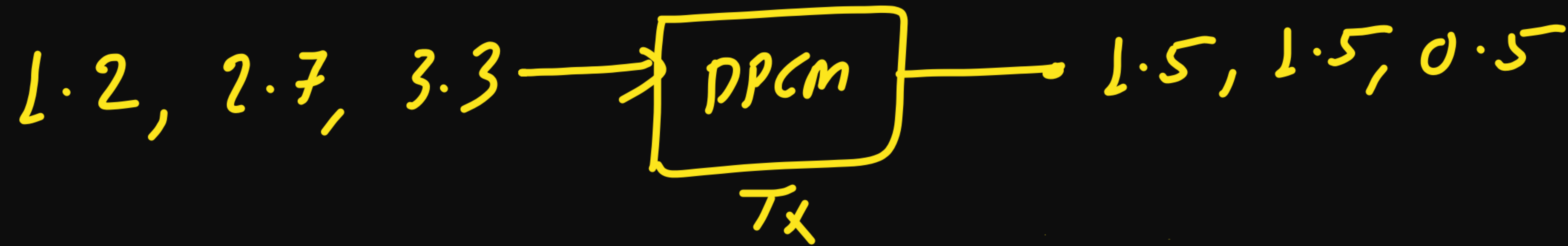














# APP FEATURES



**Download Now**  
**Adda247 APP**

L1. Entry  
4505



Premium Study Material




Current Affairs



Job Alerts



Daily Quizzes



Subject-wise Quizzes



Magazines



Power Capsule



Notes & Articles



Videos



THANKS FOR

# Watching

Adda247

LIKE



SHARE



COMMENT



SUBSCRIBE

