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ARJUN BATCH

CLASS 11th | PHYSICS

MOTION IN A STRAIGHT LINE

सरल रेखा में गति

अध्याय-2 | भाग-7



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आज क्या पढेंगे ?



1. ग्राफ
2. महत्त्वपूर्ण प्रश्न

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प्रतिरोधन दूरी

गति का तृतीय समी॰

$$v^2 = u^2 + 2as$$

$$0 = u^2 + 2as$$

$$-u^2 = 2as$$

$$s = \frac{-u^2}{2a}$$

अवरोधन दूरी

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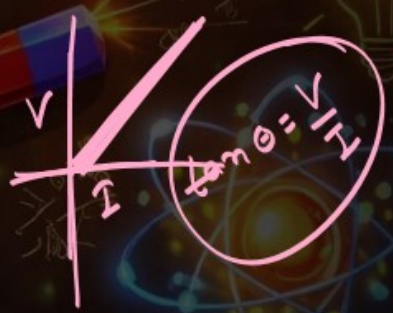
कुछ महत्त्वपूर्ण ग्राफ

Graph → Slope → प्रवणता → tanθ

$\tan\theta = \frac{Y\text{-अक्ष}}{X\text{-अक्ष}}$



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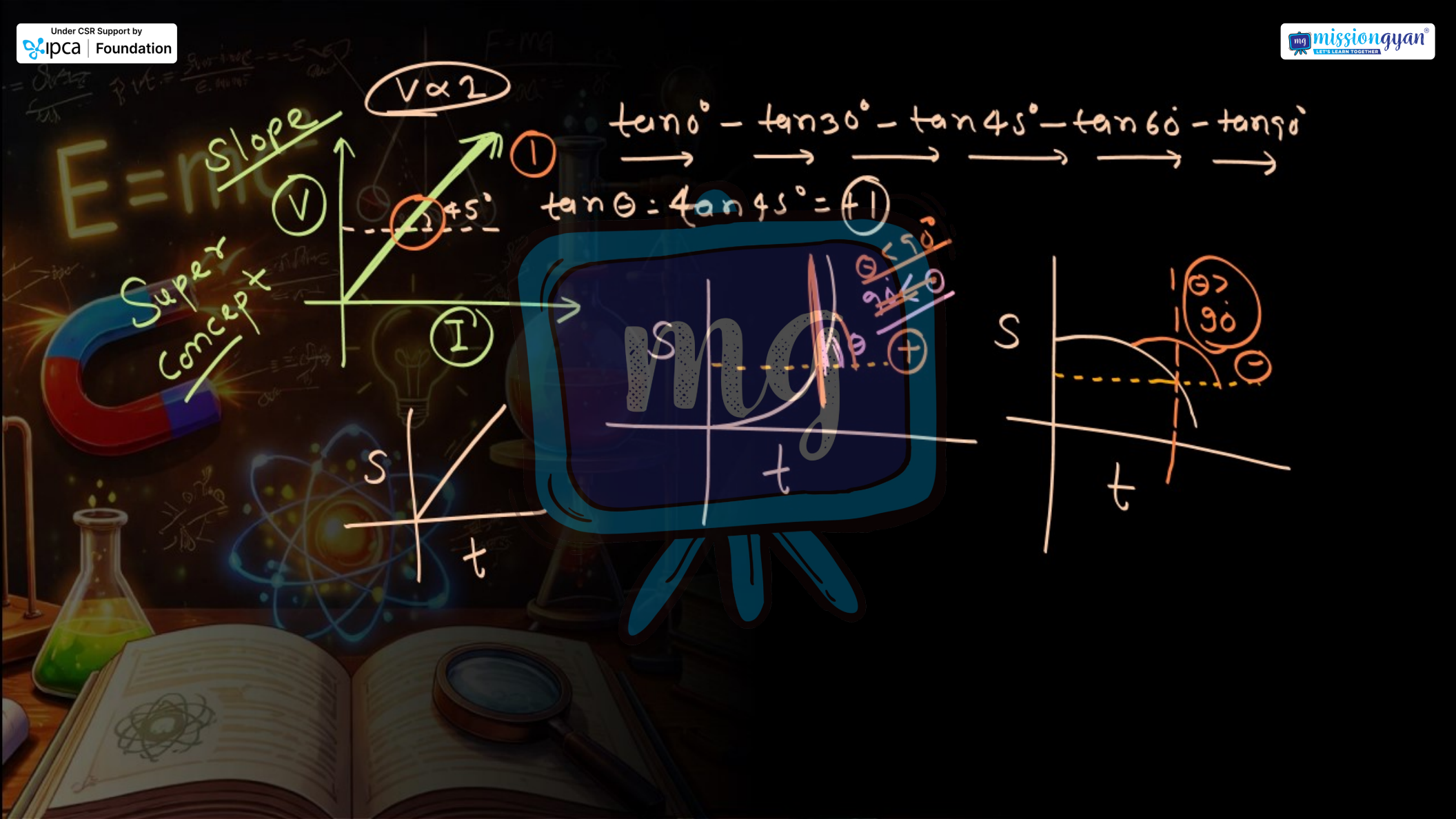

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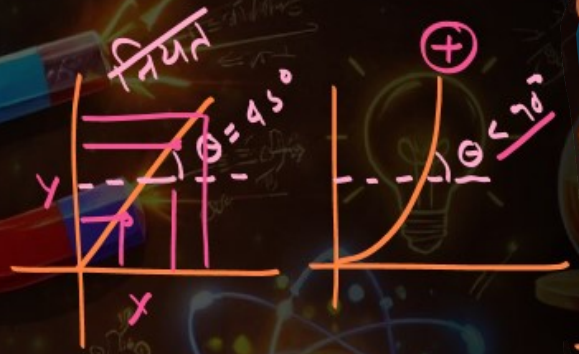
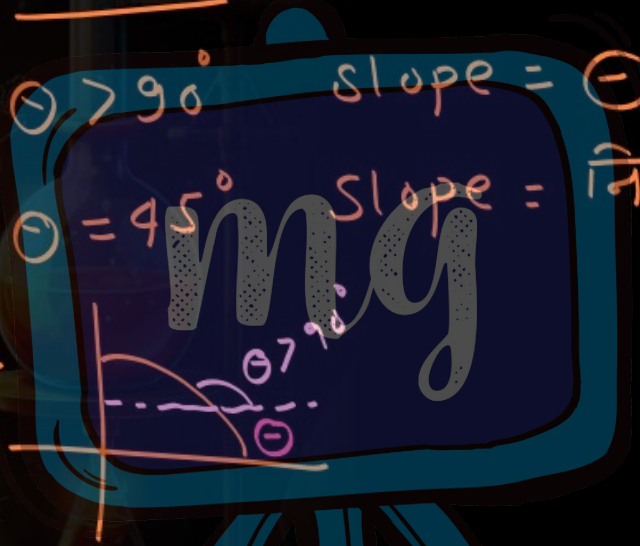
$E=mc^2$

Slope :- $\theta < 90^\circ$ Slope = $\oplus$

$\theta > 90^\circ$ slope = $\ominus$

$\theta = 45^\circ$ Slope = नियत constant





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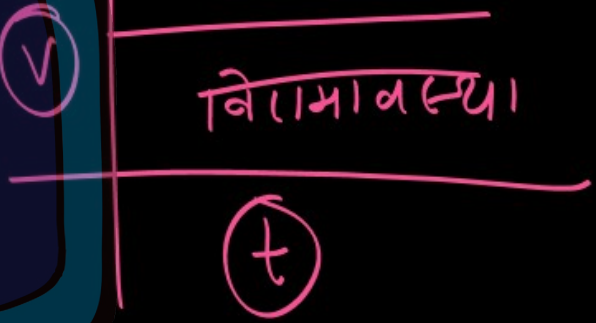
विस्थापन - समय ग्राफ

नियत रूप वि समय



विरामावस्था समान

वेग - समय ग्राफ



विरामावस्था

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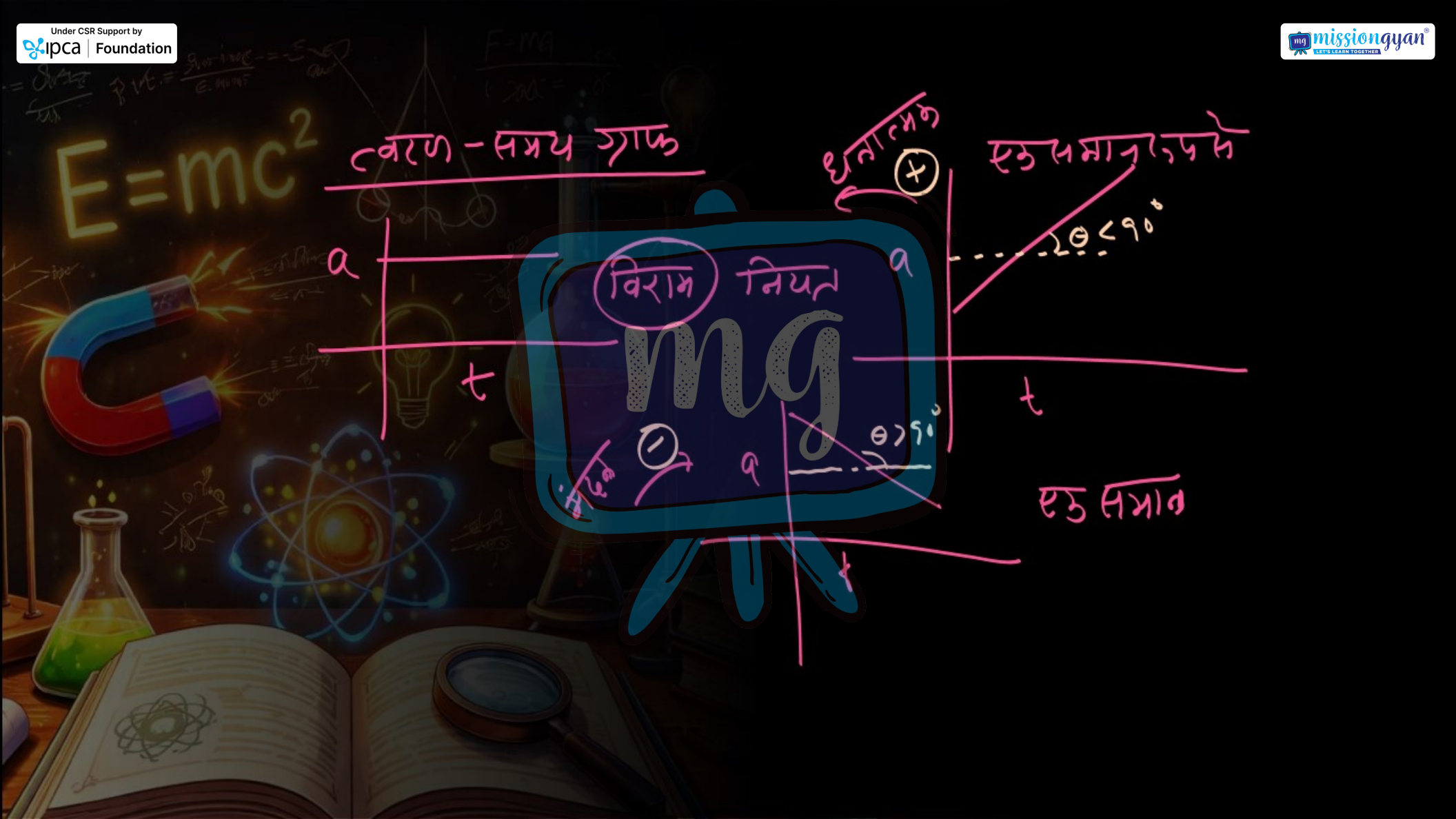

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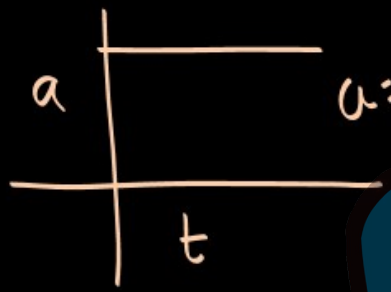
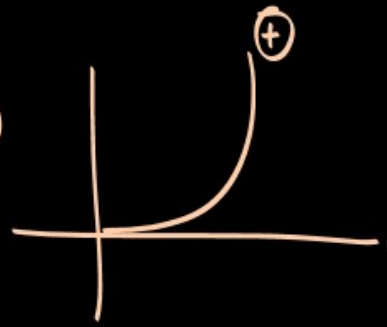
Q: a: नियत — इसके समकक्ष ग्राफ है-



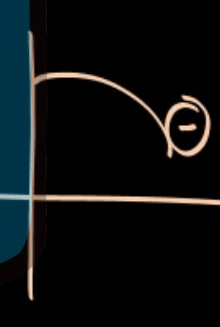
(a)



(b)



(c)



(d)



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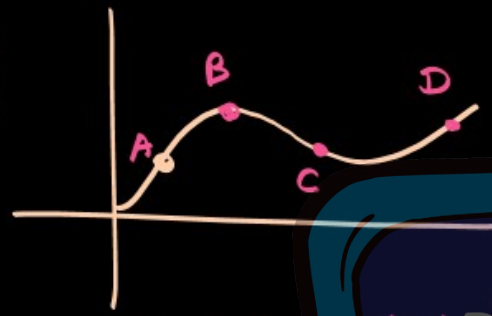
Q.



में स्थिरणात्मक बिन्दु है -

(a) A (b) B (c) C (d) D

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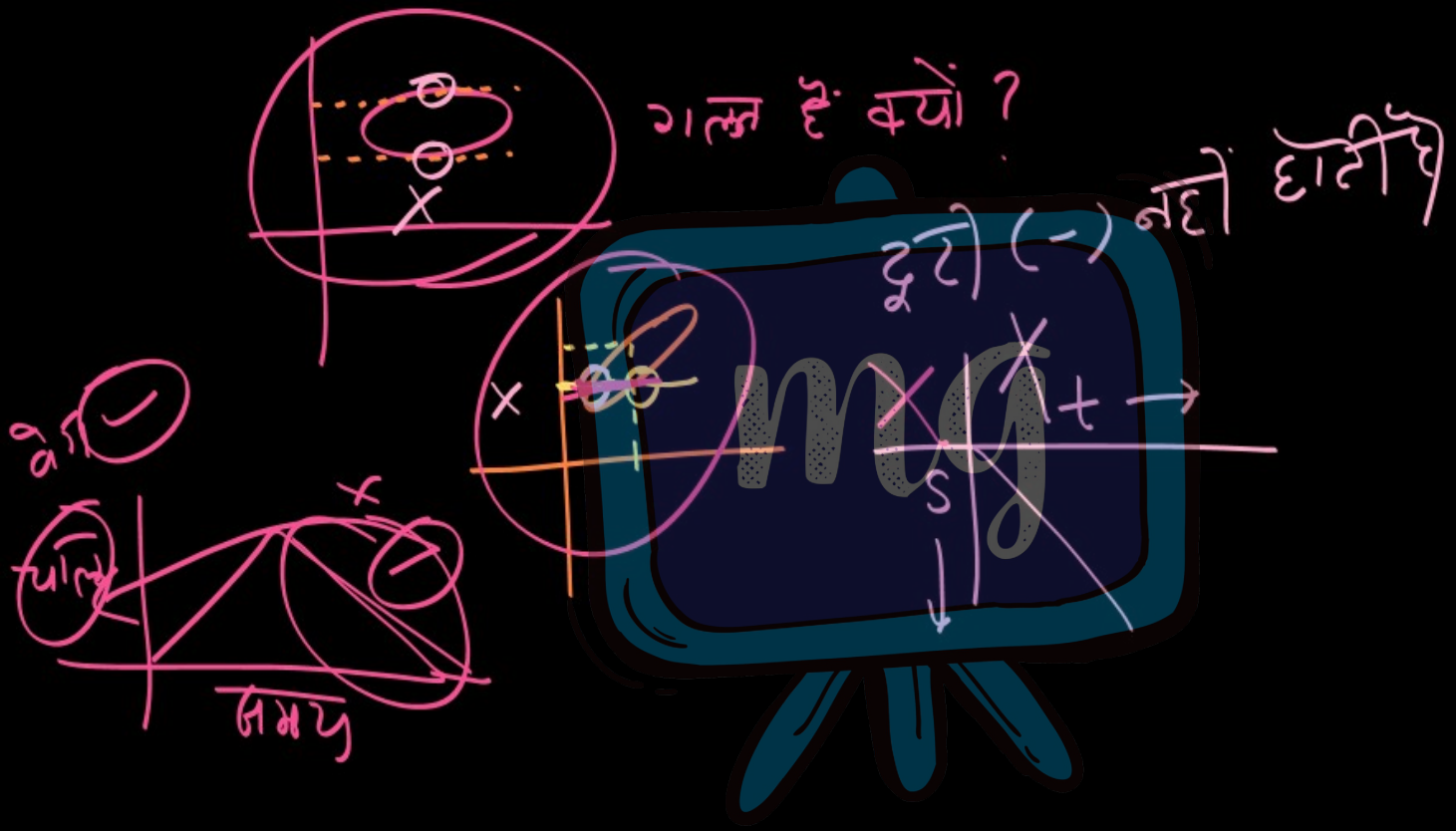

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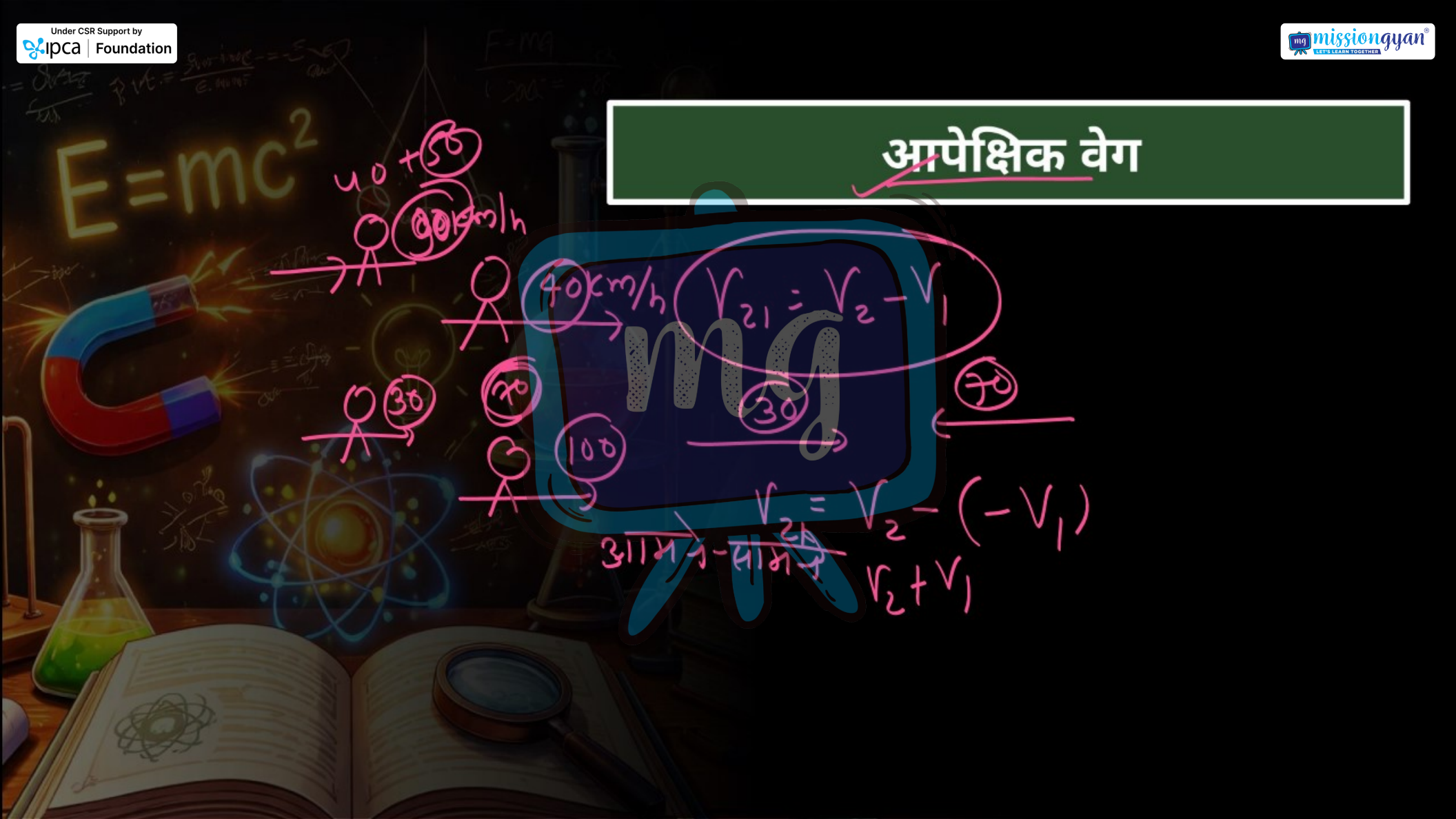
आपेक्षिक वेग



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Case-I

$V_{21} = V_2 - V_1$

Case-II

$V_{21} = V_2 + V_1$



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वेग व समय ग्राफ का क्षेत्रफल क्या प्रदर्शित करता है?

अ वेग

ब विस्थापन

स समय

द त्वरण

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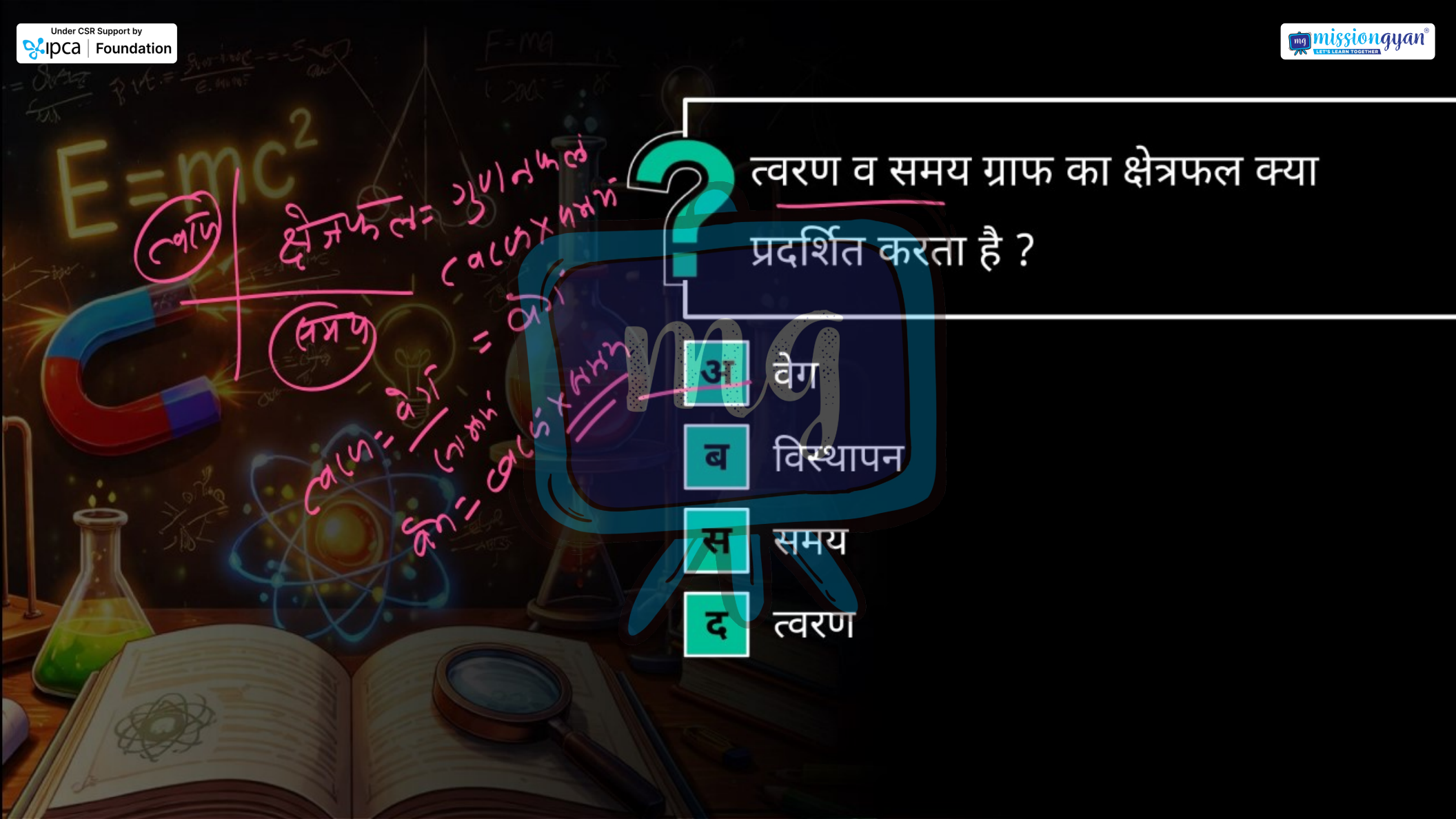

त्वरण व समय ग्राफ का क्षेत्रफल क्या प्रदर्शित करता है ?

अ वेग

ब विस्थापन

स समय

द त्वरण

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वेग - समय ग्राफ का ढाल प्रदर्शित करता है–

अ दूरी

ब वेग

स त्वरण

द विस्थापन

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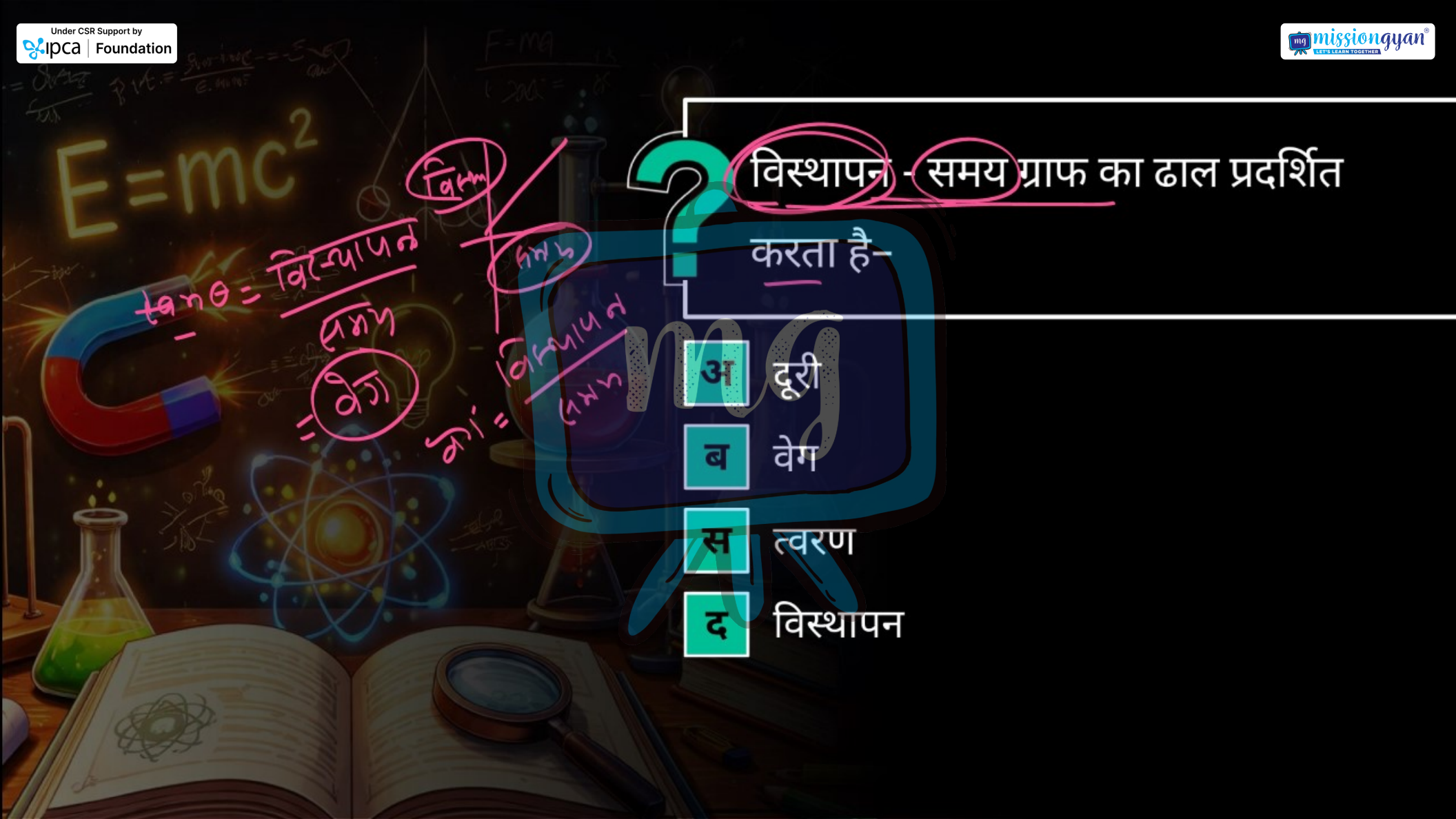

विस्थापन - समय ग्राफ का ढाल प्रदर्शित करता है-

अ दूरी

ब वेग

स त्वरण

द विस्थापन

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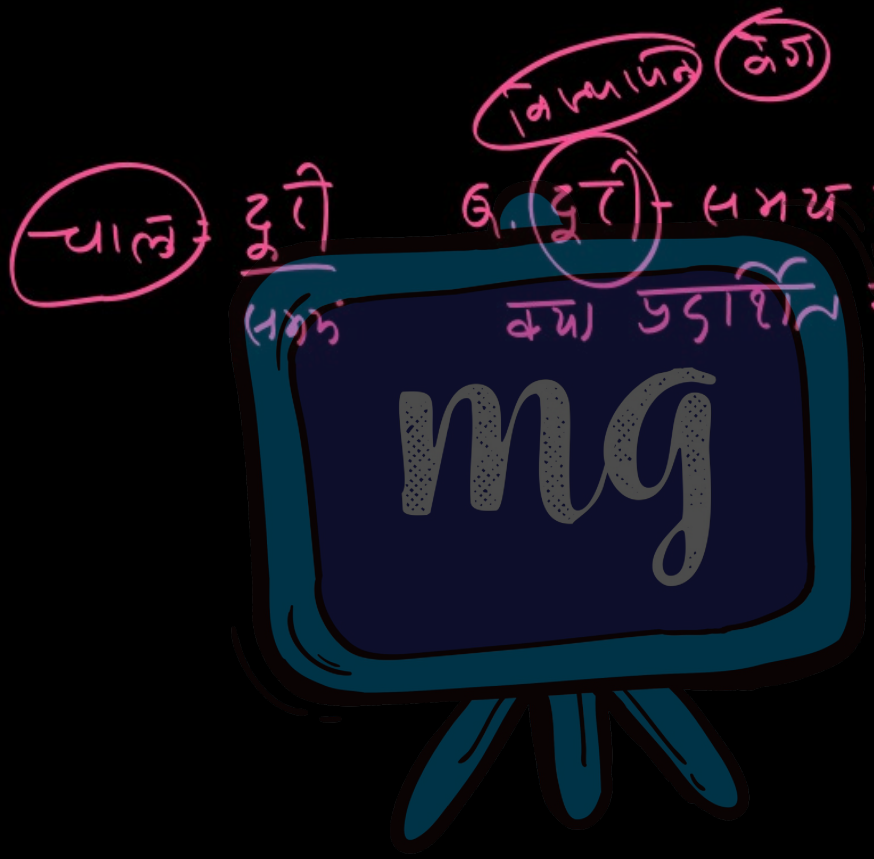

चाल = दूरी / समय

उ. दूरी = समय ग्राफ का ढाल

क्या प्रदर्शित करता है?

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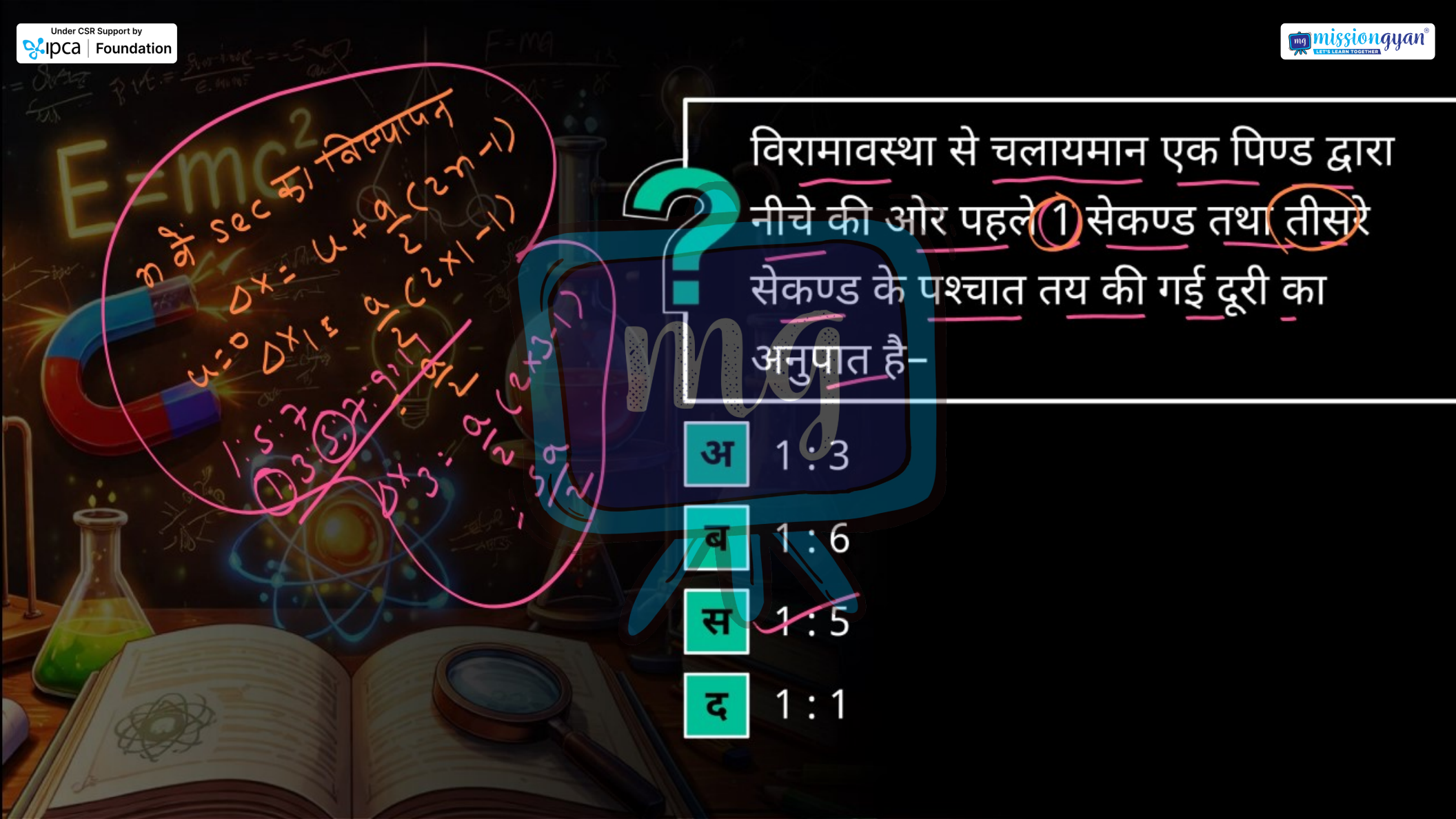

विरामावस्था से चलायमान एक पिण्ड द्वारा नीचे की ओर पहले 1 सेकण्ड तथा तीसरे सेकण्ड के पश्चात तय की गई दूरी का अनुपात है–

अ 1 : 3

ब 1 : 6

स 1 : 5

द 1 : 1

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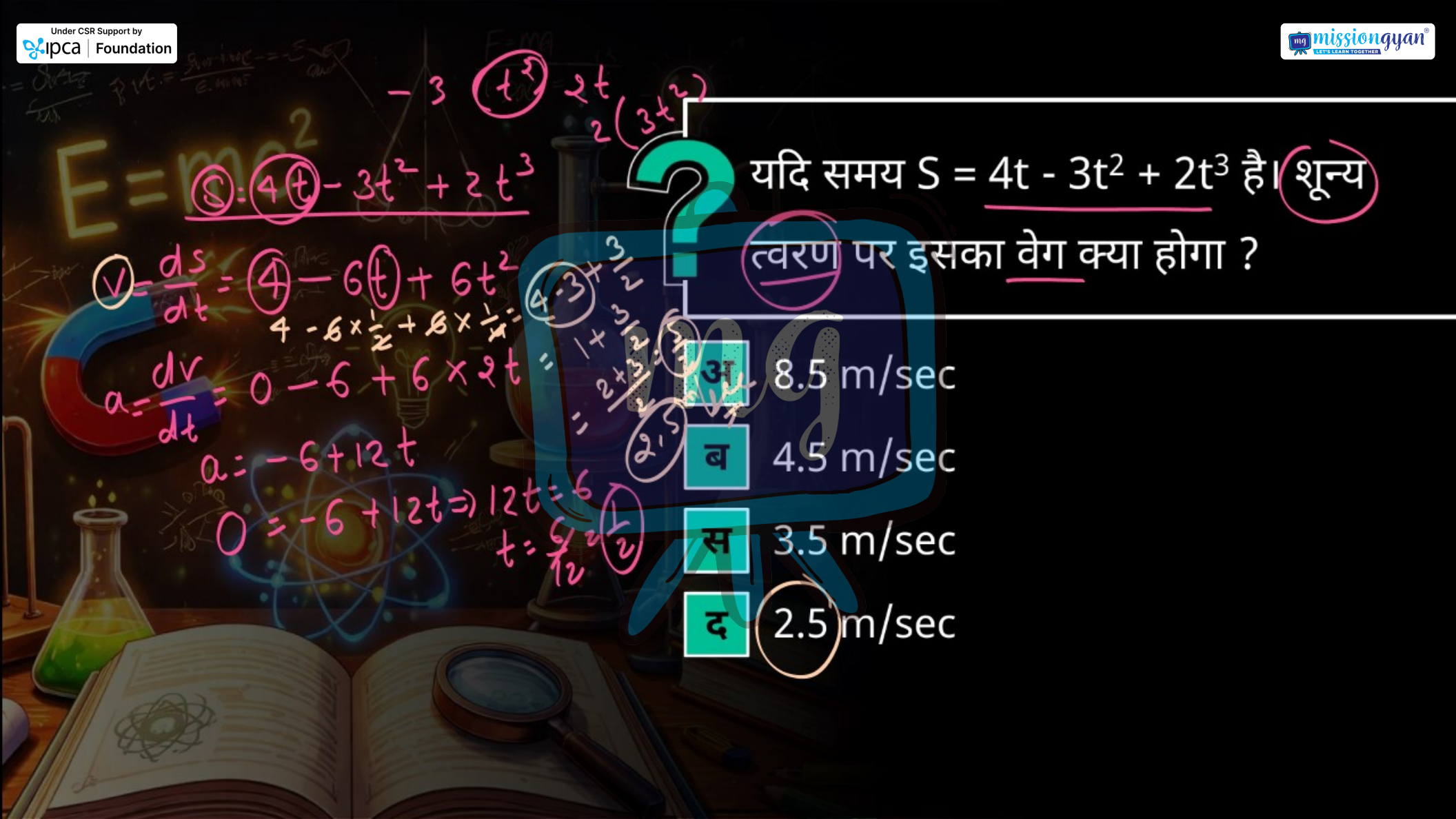

यदि समय $S = 4t - 3t^2 + 2t^3$ है। शून्य त्वरण पर इसका वेग क्या होगा ?

अ 8.5 m/sec

ब 4.5 m/sec

स 3.5 m/sec

द 2.5 m/sec

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एक गतिमान पिण्ड समय के वर्ग के अनुक्रमानुपाती में दूरियाँ तय कर रहा है। पिण्ड का त्वरण है–

अ	~~8.5 m/sec~~	बढ़ रहा है–
ब	~~4.5 m/sec~~	घट रहा है–
स	~~3.5 m/sec~~	शून्य
द	~~2.5 m/sec~~	नियत