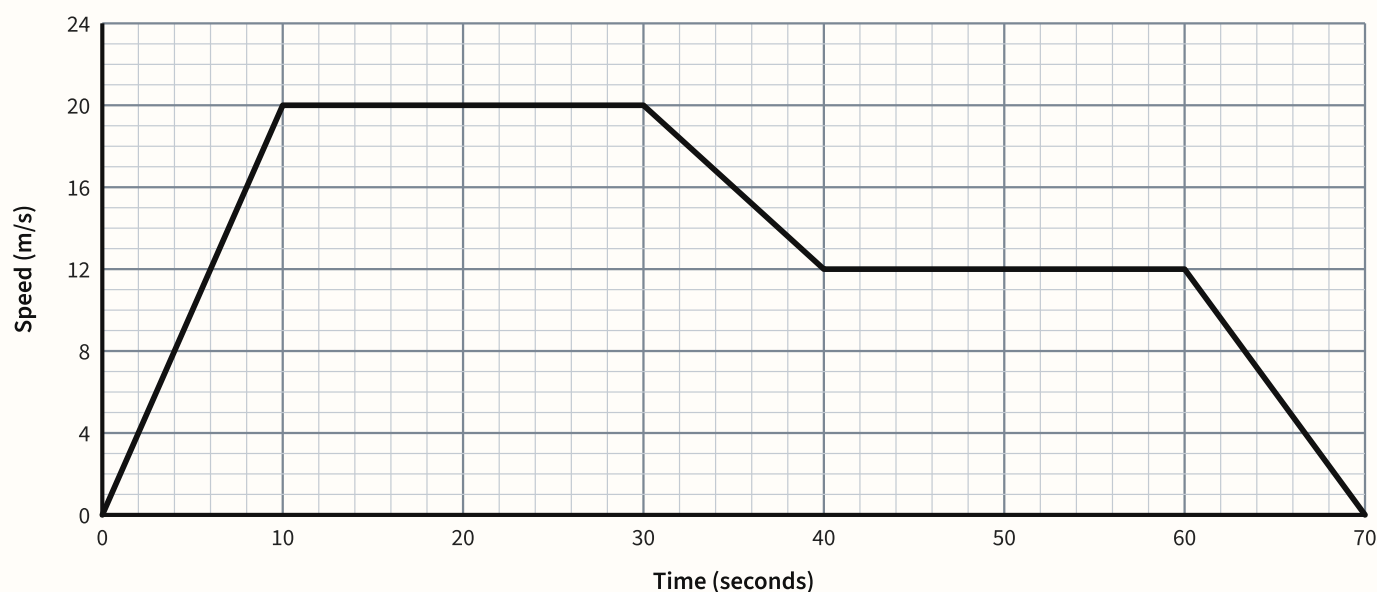


CRACK THE CODE

The graph shows a tram's speed from one stop to the next. Use gradients for accelerations and areas for distances. The last four tiles each give a tangent to a curve. Look your answer up in the **Code Box** and write the letter it unlocks in the white box. Collect all thirteen letters in the strip, then unscramble them to find the answer.

13
CLUES

1

Acceleration in the first 10 seconds (m/s^2)

Z

2

Deceleration from 30 to 40 seconds (m/s^2)

C

3

Deceleration in the last 10 seconds (m/s^2)

O

4

Distance travelled in the first 10 seconds (m)

S

5

Distance travelled from 10 to 30 seconds (m)

I

6

Distance travelled from 30 to 40 seconds (m)

R

7

Total distance from one stop to the next (m)

G

8

Speed after 35 seconds (m/s)

S

9

Distance travelled in the first 5 seconds (m)

B

10

The tangent at P passes through (1, 3) and (4, 12). Gradient of the curve at P

E

11

A tangent to a curve passes through (0, 8) and (5, -2). Gradient of the tangent

R

12

Tea cooling: the tangent passes through (2, 70) and (10, 30). Rate of change ($^{\circ}\text{C}$ per minute)

A

13

Plant growth: the tangent passes through (2, 6) and (8, 15). Rate of growth (cm per week)

N

YOUR LETTERS

Z

C

O

S

I

R

G

S

B

E

R

A

N

UNSCRAMBLE Clue: black and white, by the road (5, 8)ZEBRA CROSSING**CODE BOX**

-5 = A

-2 = R

-0.5 = V

0.5 = P

0.8 = C

1.2 = O

1.25 = U

1.5 = N

2 = Z

3 = E

5 = L

16 = S

25 = B

50 = H

100 = S

120 = M

160 = R

200 = T

400 = I

960 = G

