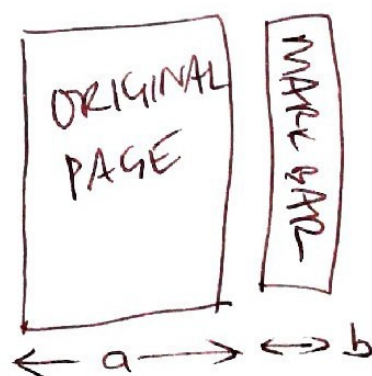7123456

A1 (a) This is an answer to a question on how to add marking boxes to a pdf. They should appear somewhere over there ⟶

(b) But actually, if we drew a diagram, we might see this.

ORIGINAL PAGE

MARK PAGE

⟵ a ⟶ ⟷ b

I forgot something .. !!!

Something extra entered by hand using a very old mischievous tablet

put it in here using the pdf editor

(c) The maths for the width is trivial

$$w = a + b.$$

OR:

$$\int_0^{a+b} d\ell = a + b$$

which is what we expect.

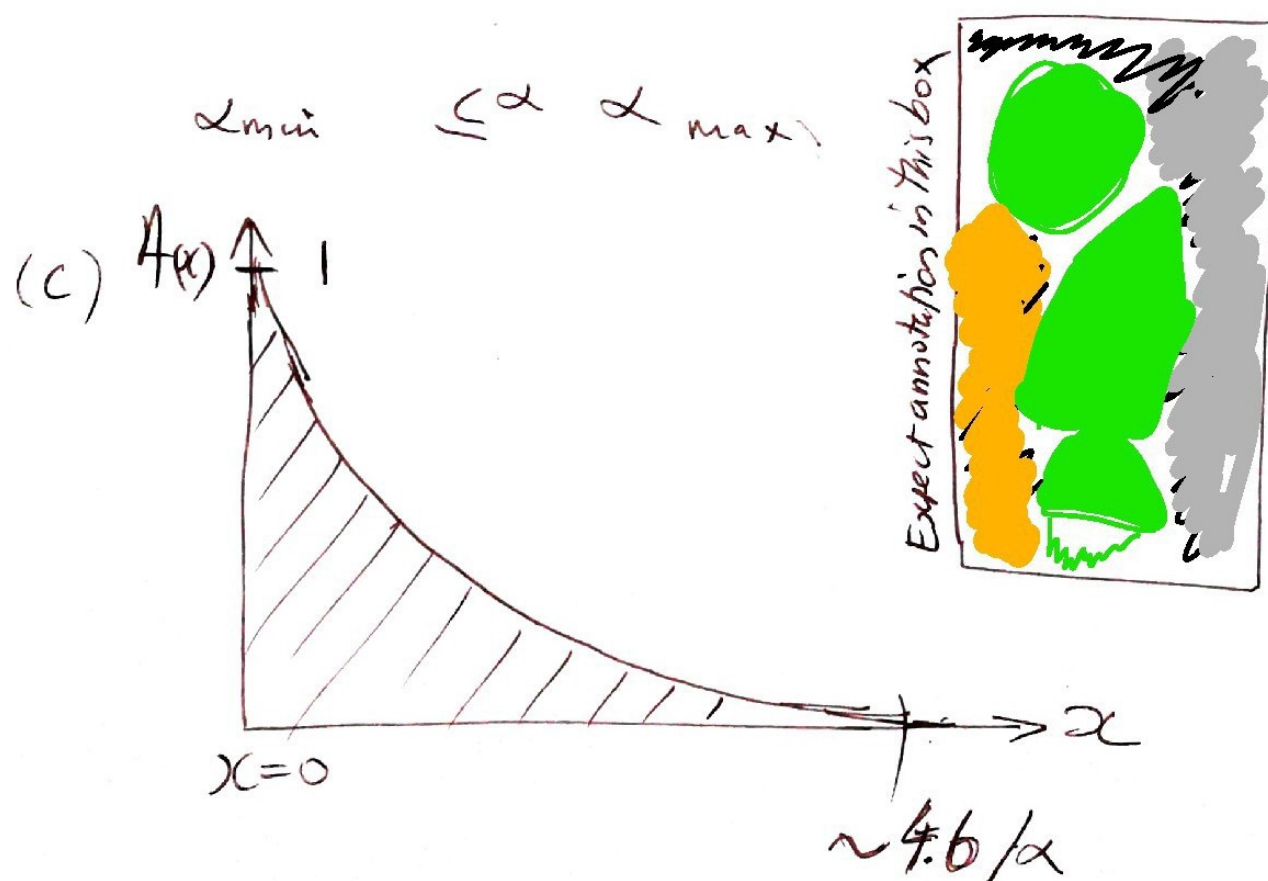7123456

A2 (a) We start with an exponential

$$e^{-\alpha x} = A(x)$$

Then make up some conditions to complete the specification, such as

$$\alpha \leq \alpha_{max}, \quad \text{and}$$

$$\alpha \geq \alpha_{min}.$$

(b) Again, not rocket science that

$$\alpha_{min} \leq \alpha \leq \alpha_{max}.$$

(c)

Expect annotation in this box

B1

(a)
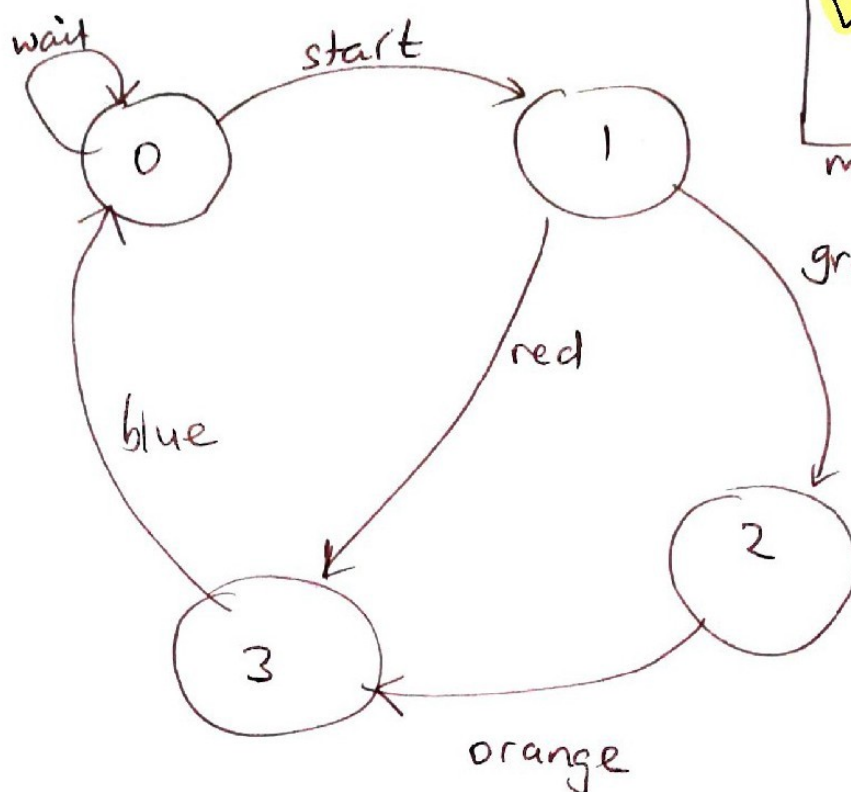
$$V = \frac{W}{2}$$

more annotation in here

"The coloured states are numbered starting at zero" makes no sense because the edges have colour names, and these represent <u>transitions</u>.

(b)

$$\overline{A + B} = \overline{A} \cdot \overline{B}$$

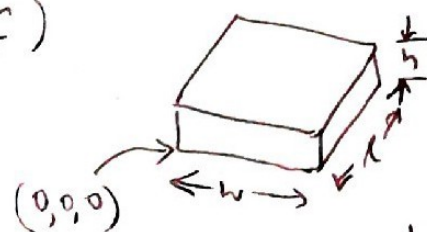$$A = A(B + \overline{B})$$

I'll edit/annotate in this box electronically

$$\oint V \, dv = 0$$

kind of makes it a bit simple.

because I forgot something. oops.

(c)

$$\oint_r \psi_r \, dv = \int_0^h \int_0^l \int_0^w \psi(x, y, z) \, dx \, dy \, dz$$

$$(0,0,0)$$

$$\psi(x, y, z) = x + 2y - z^2$$