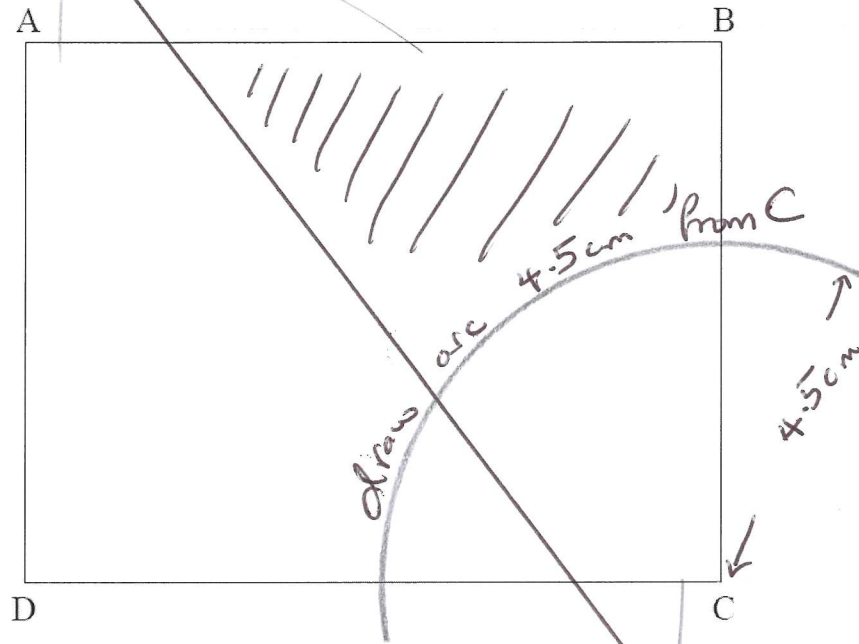


m8 = 27 days to go!

3



ABCD is a rectangle, with $AB = 9\text{ cm}$ and $BC = 7\text{ cm}$.

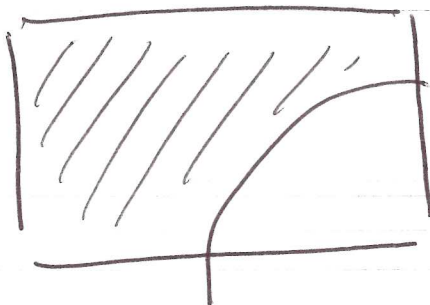
Shade the region inside the rectangle which is the locus of all points that are

(i) greater than 4.5 cm from C

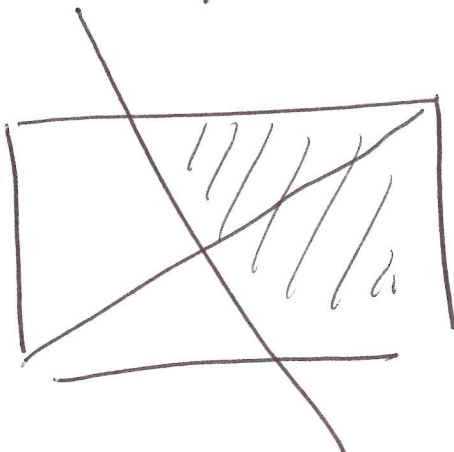
and (ii) nearer to B than D.

[3]

Find perpendicular of line BD

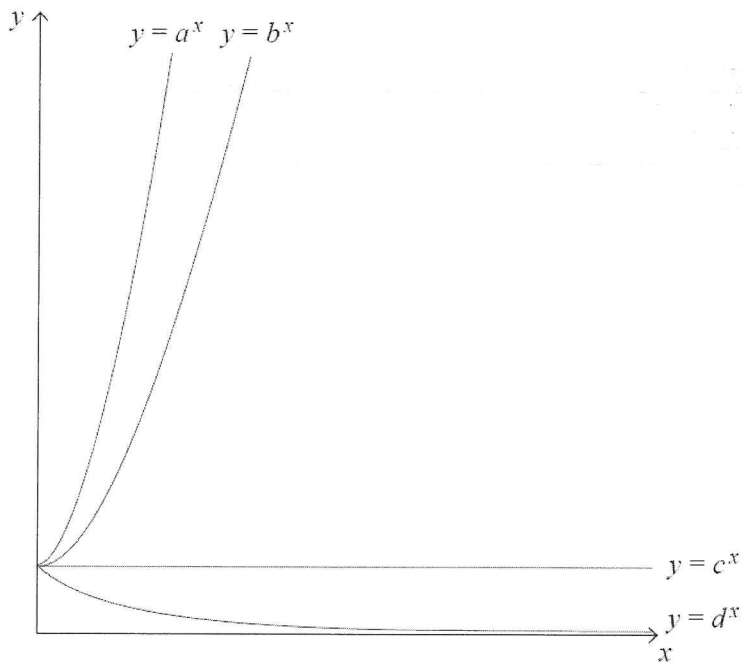


further than 4.5cm



Nearer B than D

11



Sketches of $y = a^x$, $y = b^x$, $y = c^x$, $y = d^x$ are drawn above.

(a) a and b are numbers. One has the value 2 and the other has the value 3

Which is which?

Answer $a = \underline{3}$, $b = \underline{2}$ [1]

(b) Write down the value of c

Answer $c = \underline{1}$ [1]

(c) Estimate the value of d

Answer $d = \underline{0.7}$ [1]

$$1^x \quad 1^{\text{anything}} = 1$$

d must be less than 1 as it keeps getting smaller