

M8 = 27 days to go!

3



ABCD is a rectangle, with $AB = 9$ cm and $BC = 7$ cm.

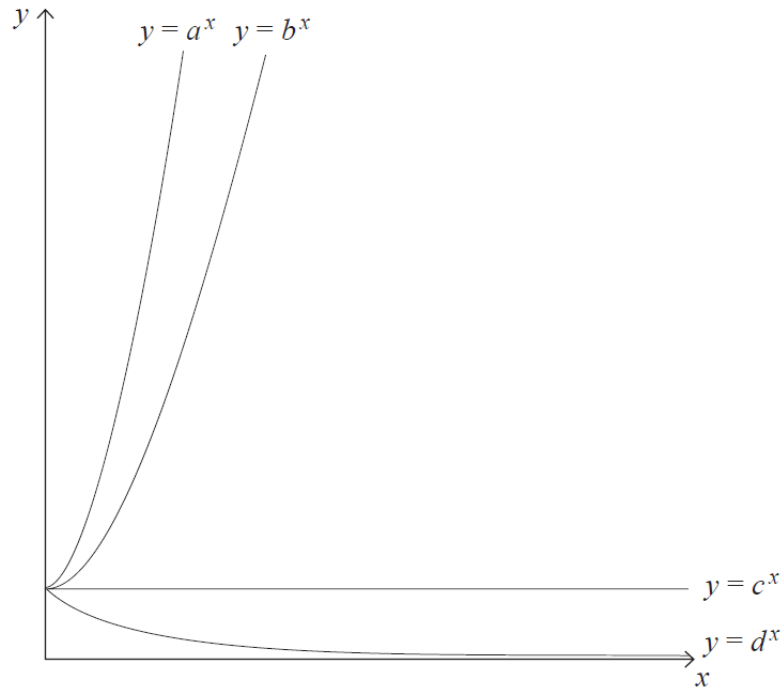
Shade the region inside the rectangle which is the locus of all points that are

(i) greater than 4.5 cm from C

and (ii) nearer to B than D.

[3]

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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 $a =$ _____, $b =$ _____ [1]

(b) Write down the value of c

Answer $c =$ _____ [1]

(c) Estimate the value of d

Answer $d =$ _____ [1]