

MG = 10 days to go!

18 Over a period of 8 hours, the temperature of a room follows the relationship

$$T = h^2 - 6h + 15$$

T is the temperature in degrees Celsius, h hours after the experiment started.

(a) Complete the table below:

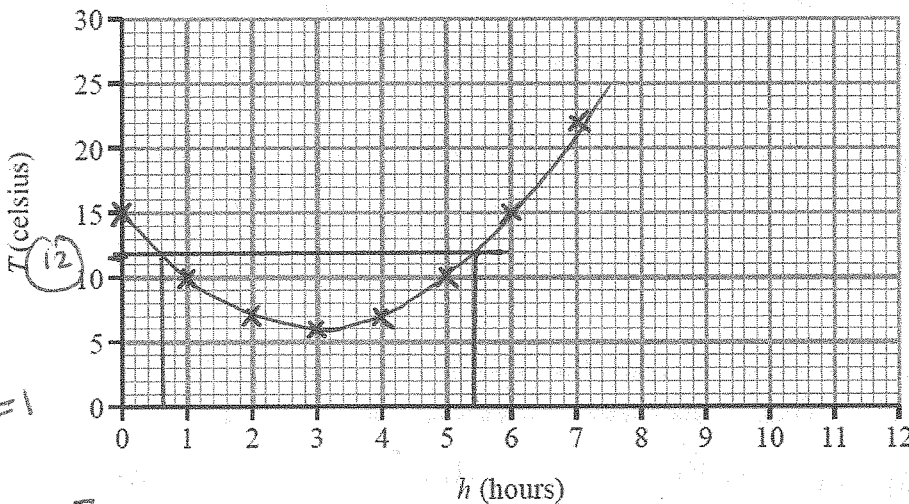
h	0	1	2	3	4	5	6	7
T	15	10	7	6	7	10	15	22

$2^2 - 12 + 15 = 7$

$5^2 - 30 + 15 = 10$

[1]

(b) Plot the points and draw the graph on the grid below:



smooth curve

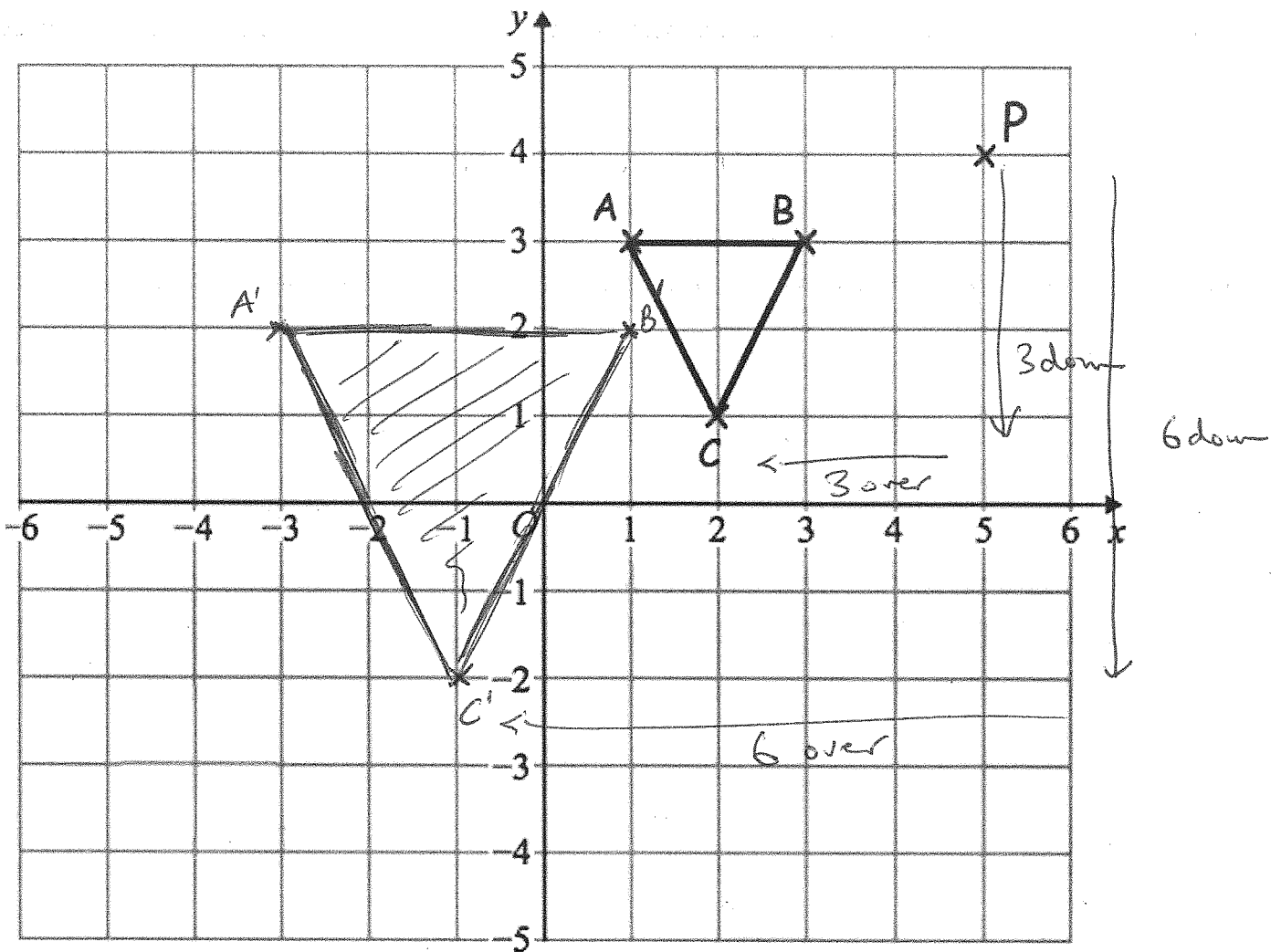
↑
Each = 1

→ Each = 0.2 hrs = 12 min [2]

(c) Use your graph to find the times when the temperature in the room was 12 degrees Celsius.

36 minutes and 5 hrs 24 minutes.

Answer 36, 5.24 [1]



Enlarge triangle ABC by scale factor 2, using the point P as the centre of enlargement.

Count the squares from point P.

From P to A 3 squares left and 1 down

so enlargement 6 squares left and 2 down (3)

: Harry is trying to write the number 24 as a binary number.

2^4	2^3	2^2		
16	8	4	2	1
1	0	1	1	2

His answer is 10112

- (a) What mistake has Harry made? You can have 2 in a binary number
 (b) What is the correct answer?

$$16 + 8 = 24$$

16	8	4	2	1
1	1	0	0	0

Ans 11000