

Locⁱ Past Paper Questions

①

Find and shade the region that satisfies both of the following conditions.

- (i) The points are less than 6.5 cm from X.
- (ii) The points are nearer to Y than to X.

[2]

X ————— Y



- (a) Express 360 as a product of prime numbers in index form.

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[3]

- (b) Explain why $2^5 \times 3^4$ is **not** a perfect square.

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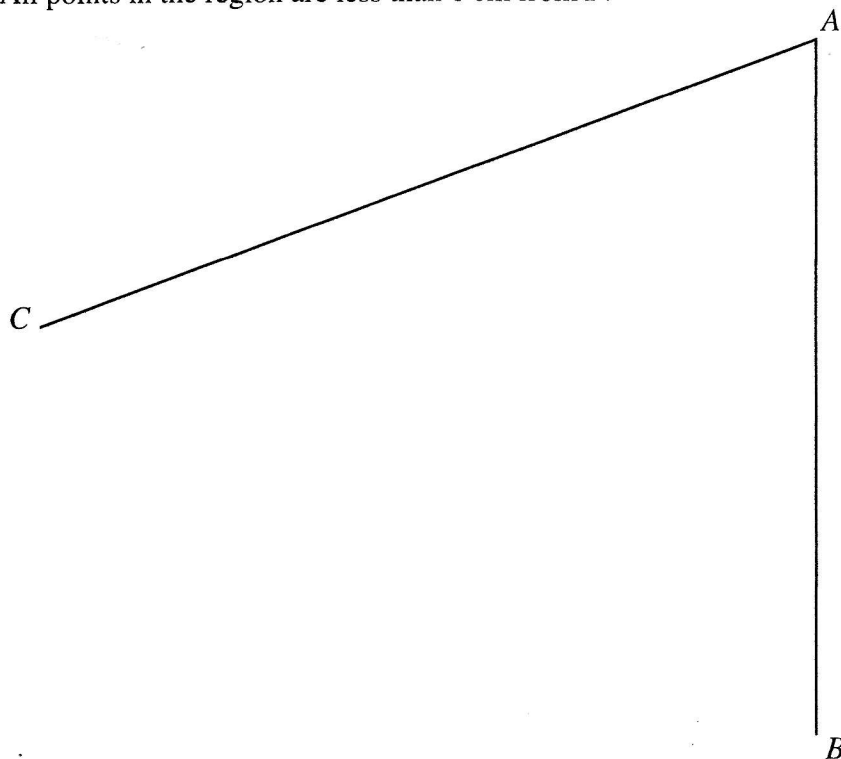
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[1]

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- (a) The diagram below shows two straight lines AB and AC . Find and **shade** the region which satisfies **both** of the following conditions.

- (i) All points in the region are nearer to AC than to AB .
- (ii) All points in the region are less than 6 cm from B .



[3]

3

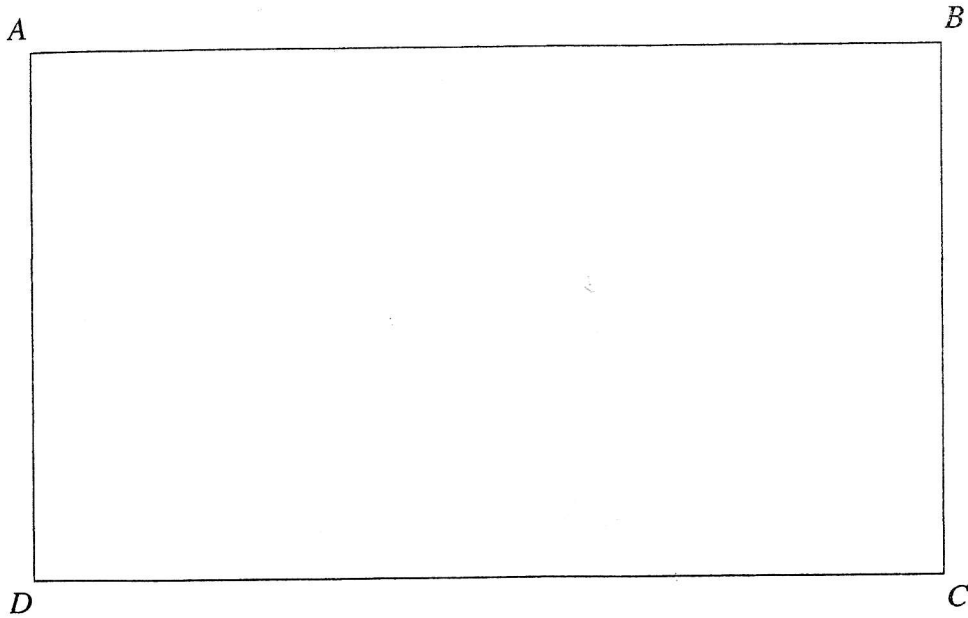
In the following diagram, shade the region which satisfies **all** of the following conditions.

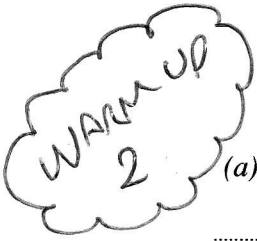
The distance from AD is greater than the distance from DC .

The distance from D is less than the distance from C .

The distance from A is less than 7 cm.

[4]





(a) Express 756 as a product of prime numbers in index form.

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[3]

(b) Write down the least positive whole number that 756 must be **divided** by to make the result a perfect square.

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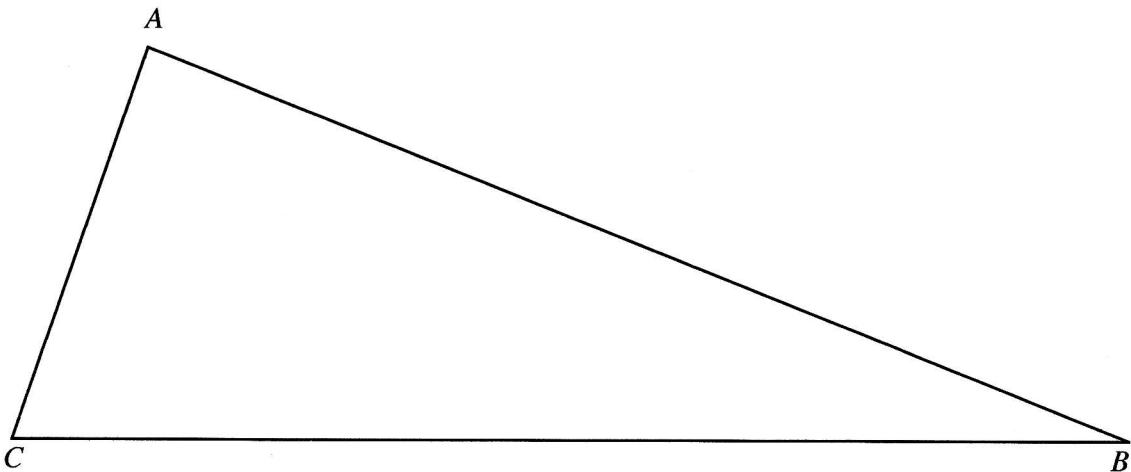
[1]

4

Find and shade the region of points **inside the triangle ABC** that satisfy both of the following conditions.

- (i) The points are nearer to *A* than to *B*.
- (ii) The points are nearer to *BC* than to *AC*.

[3]



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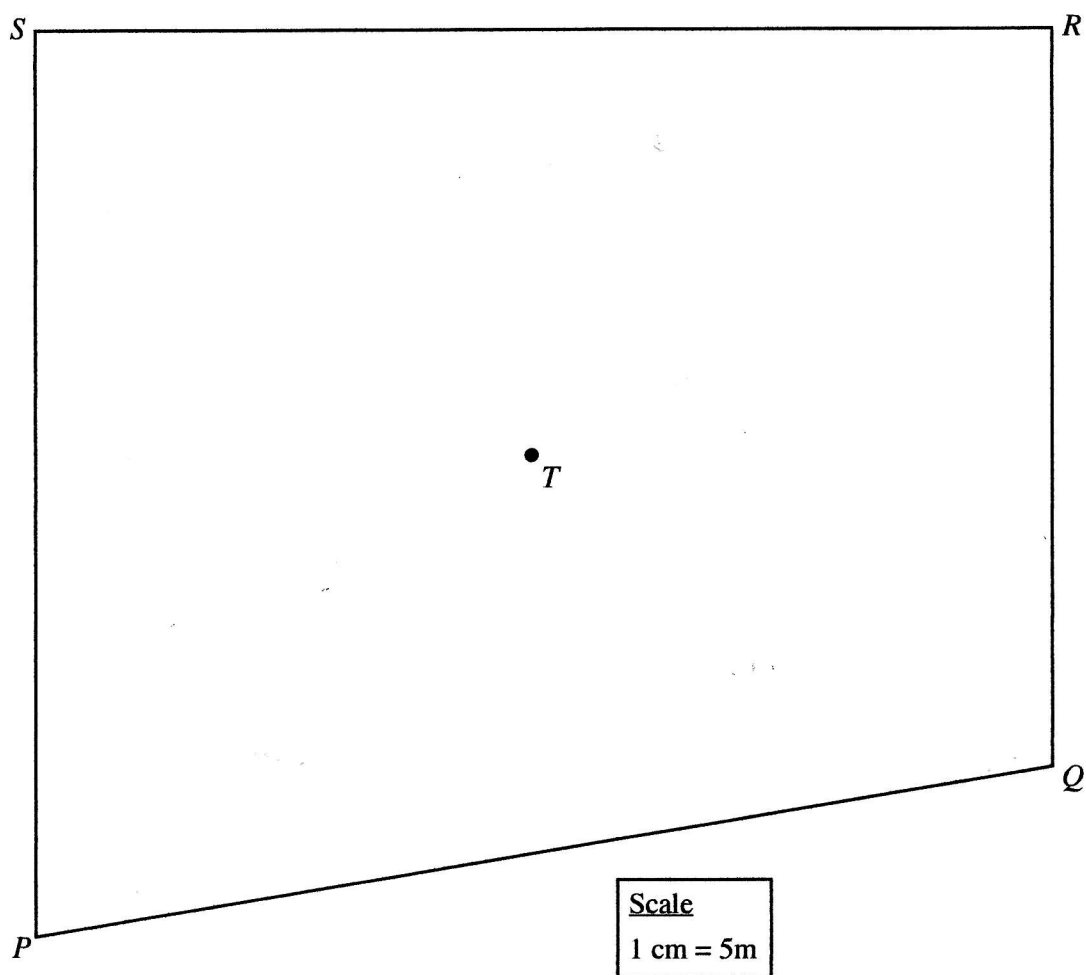
The diagram represents a plan of a plot of land $PQRS$. There is a tree at the point T . The scale used is 1cm represents 5m.

Find the region that satisfies all of the following conditions.

All the points in the region are

- (i) nearer to PS than to PQ ,
- (ii) further than 15m from PS ,
- (iii) within 25m of the tree marked as T .

[4]



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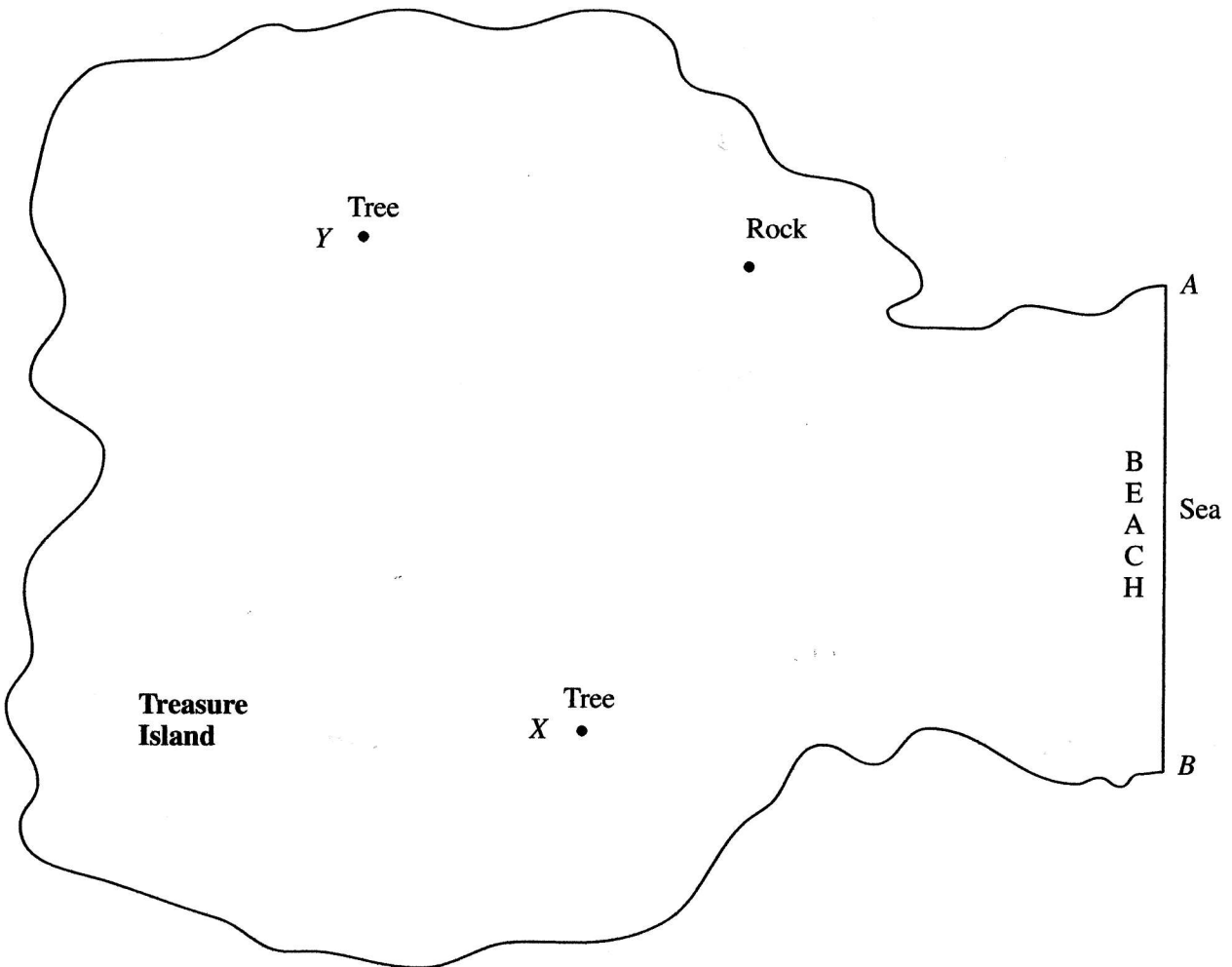
Below is a sketch of Treasure Island using a scale of 1cm to represent 10m. Captain Blood has buried the treasure using the following rules.

The treasure is

- (i) more than 50m away from the straight line beach AB ,
- (ii) nearer to the tree at X than to the tree at Y ,
- (iii) less than 40m away from the rock.

Clearly indicate the region in which the treasure has been buried.

[4]

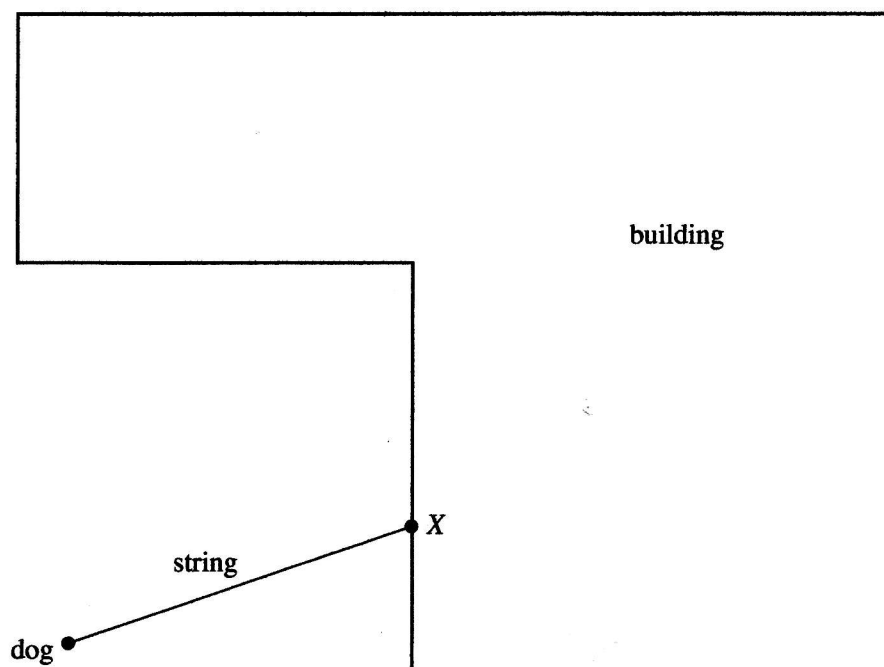


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The diagram represents an aerial view of a building. A dog is tied, by means of a string, to a side of the building at X .

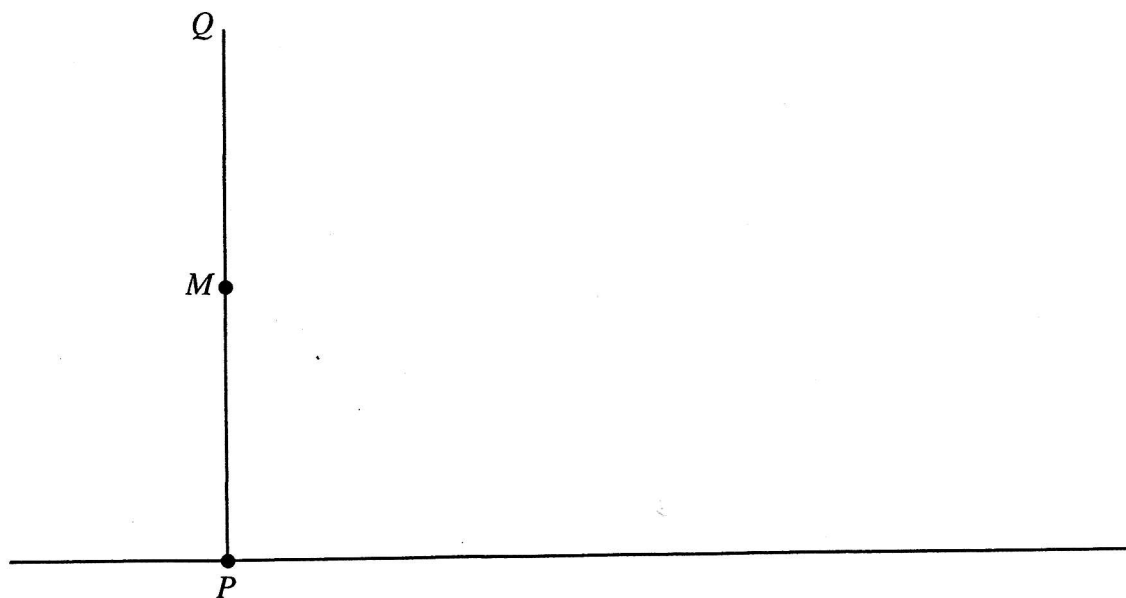
Draw the boundary of the region in which the dog can roam.

[3]

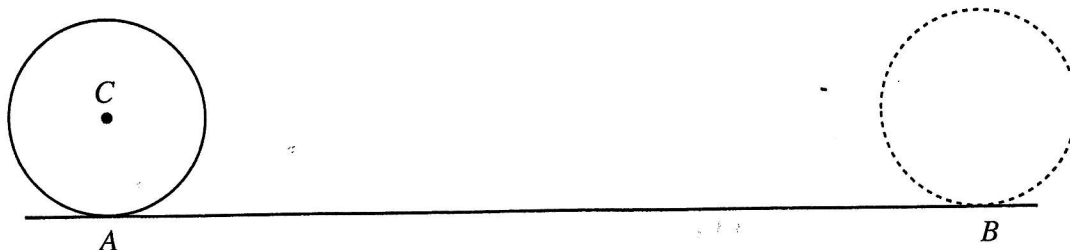


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- (a) A rod PQ is hinged to the ground at P . Draw the locus of its mid-point M as it falls to the ground. [1]



- (b) A circular disc, centre C , is rolled along level ground from A to B . Draw the locus of C . [1]



- (c) A circular disc, centre D , is rolled down a slope and then along level ground. Draw the locus of D as the disc is rolled from X to Y . [2]

