

Area

and how to calculate from a map



iPad :)

What about irregular shapes?



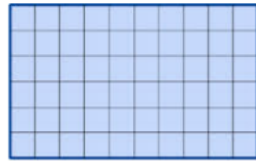
planimeter



"make boxes" or other shapes



use "strips" (lined paper)

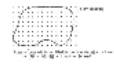


6 cm

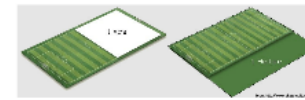
10 cm

What's the area of the rectangle?

What is the area of the rectangle if it is a 1:5,000 map?

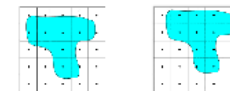


graph paper or dot grid



1 ha = 10,000 m²
1 ha = 2.47 acres

what about error/ uncertainty?



- size of grid
- do more than once ... average



What's the area of the bat?

assume 1 cm spacing and a scale of 1: 5,000

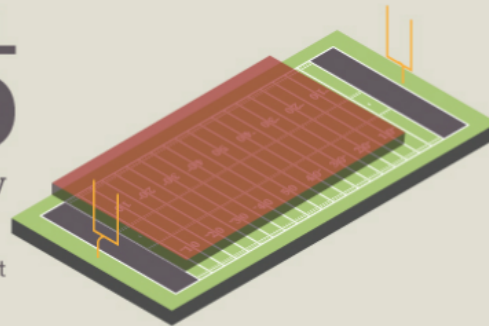
Area Calculator
<http://www.daftlogic.com/projects-google-maps-area-calculator-tool.htm>


WHAT EQUALS AN ACRE?

It was commonly known as the amount of land a farmer could plow in one day with a yoke of oxen. It took the real estate agent a lot longer. A look online will tell you an acre is equal to 43,560 square feet, but how big is that?

1 FOOTBALL FIELD

An acre of land is roughly the size of a football field
1 acre = 43,560 sq ft
Football field = 48,000 sq ft
(w/o endzones)



18  **EQUALS 1 ACRE**

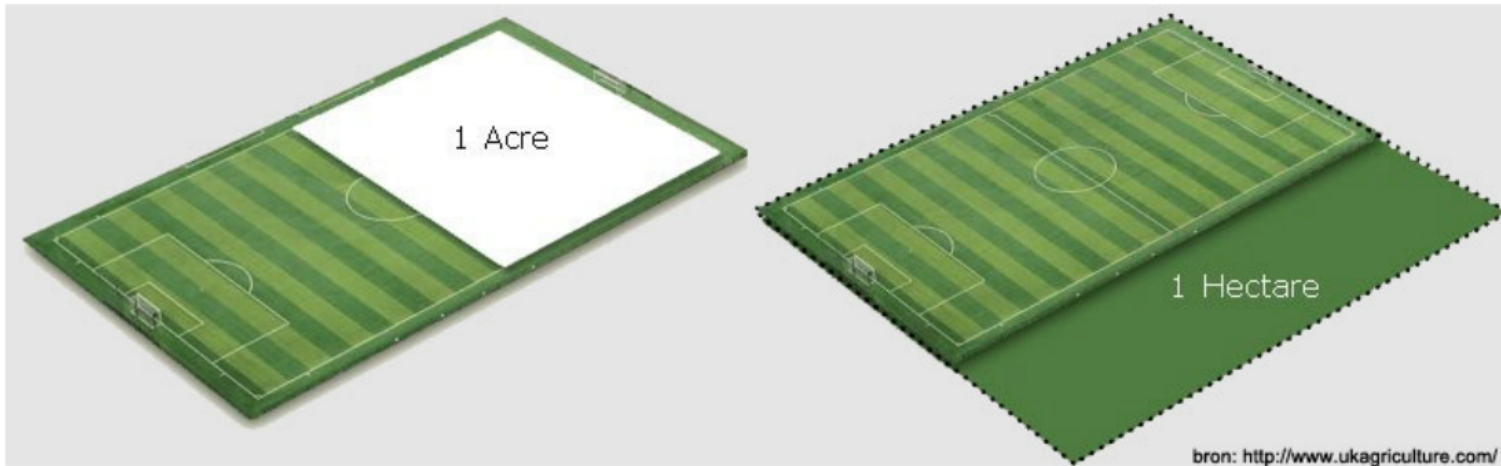
average sized homes

Eighteen 2,400 sq ft homes fit nicely on an acre of land.

1,584 POTATOES

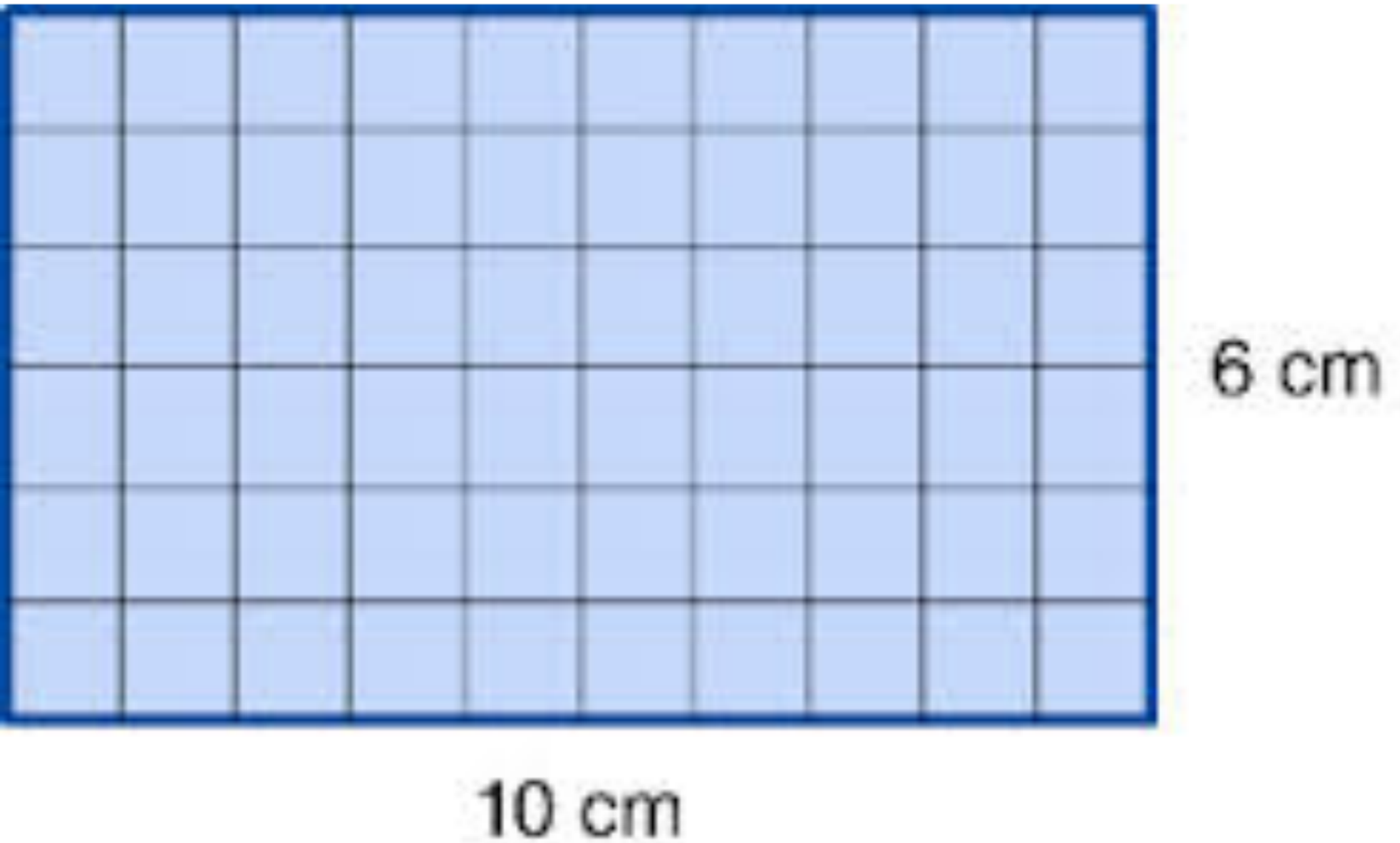
The amount of potatoes needed to make a line from one end to the other of an acre.



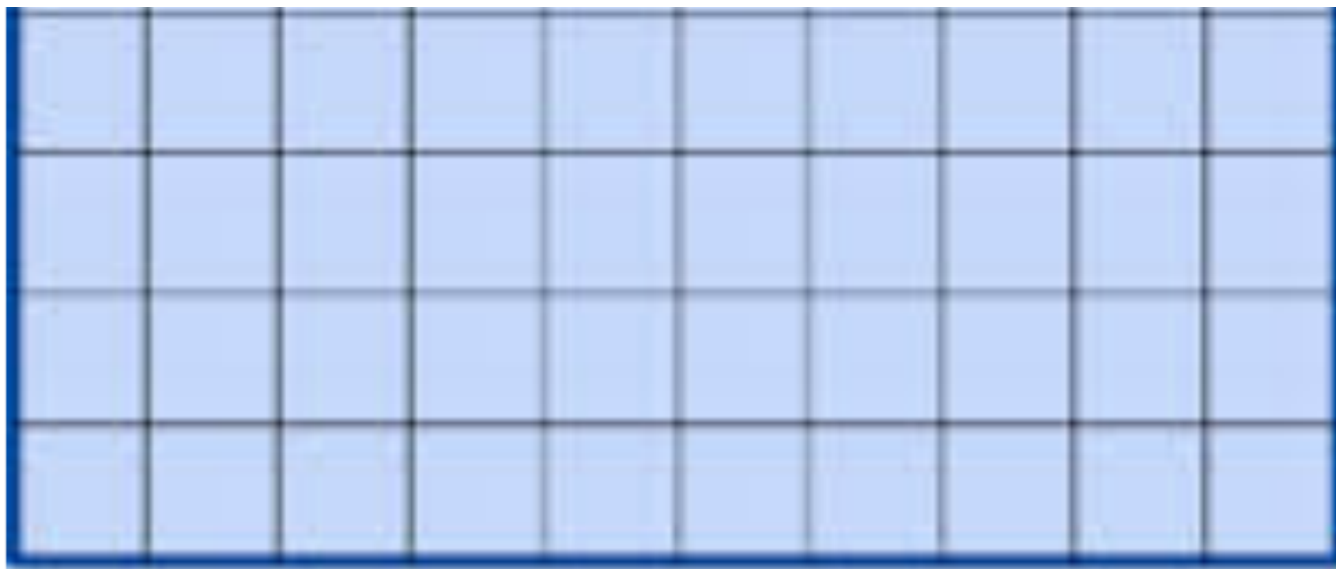


$1 \text{ ha} = 10,000 \text{ m}^2$

$1 \text{ ha} = 2.47 \text{ acres}$



What's the area of the rectangle?

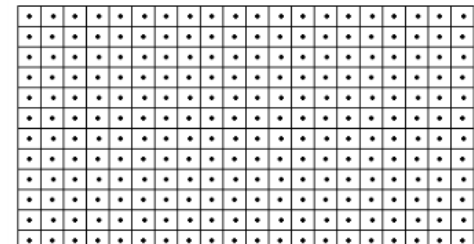
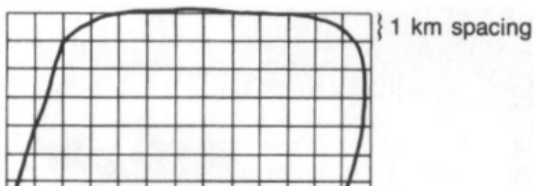


6 cm

10 cm

What's the area of the rectangle?

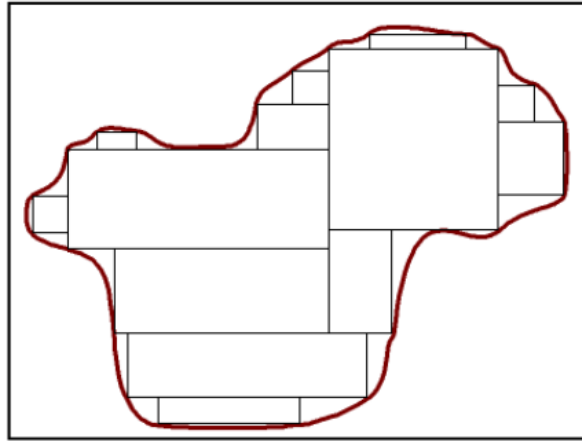
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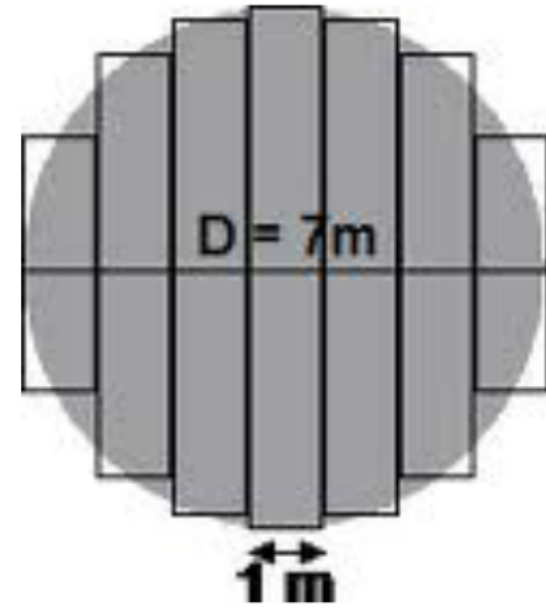
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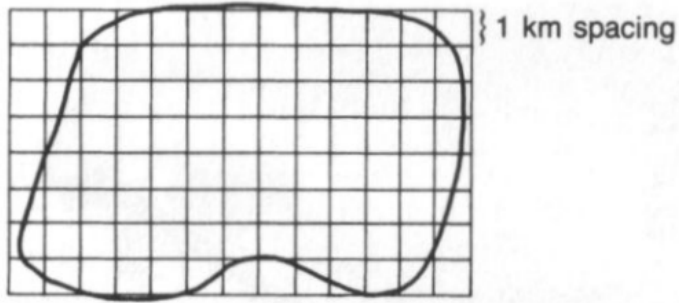
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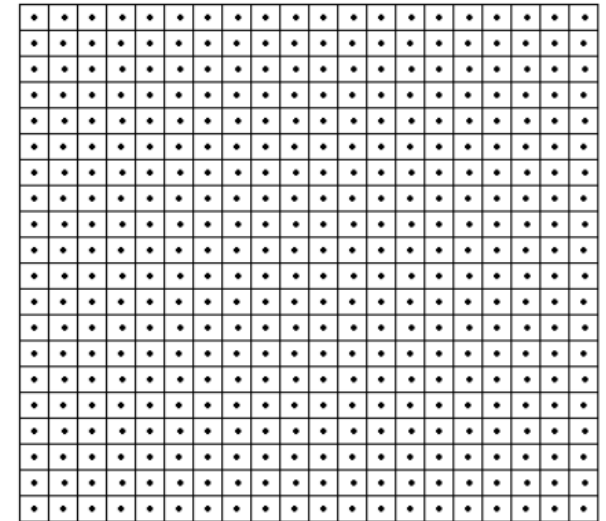
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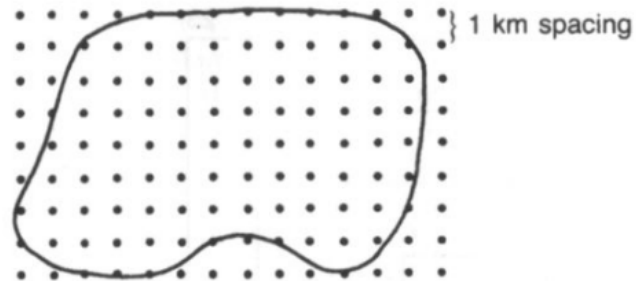
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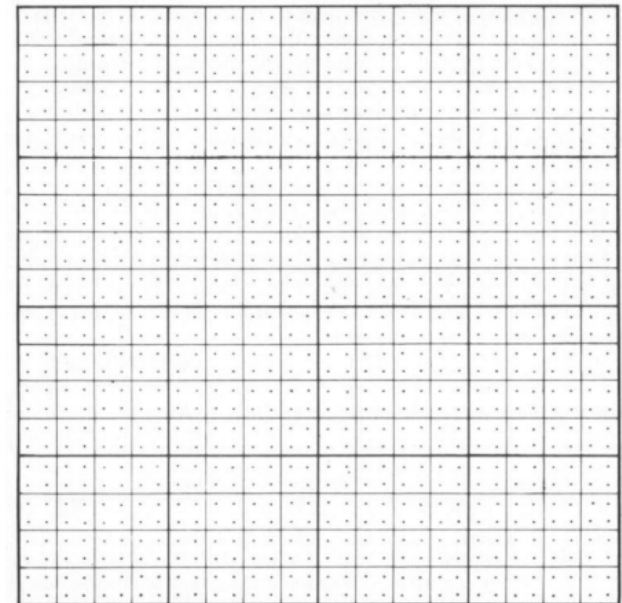
$$\begin{aligned} \text{Area} &= [(\text{full cells}) + 1/2(\text{partial cells})] \times \text{cell value} \\ &= [71 + 1/2(26)] \times 1 \text{ km}^2 = 84 \text{ km}^2 \end{aligned}$$

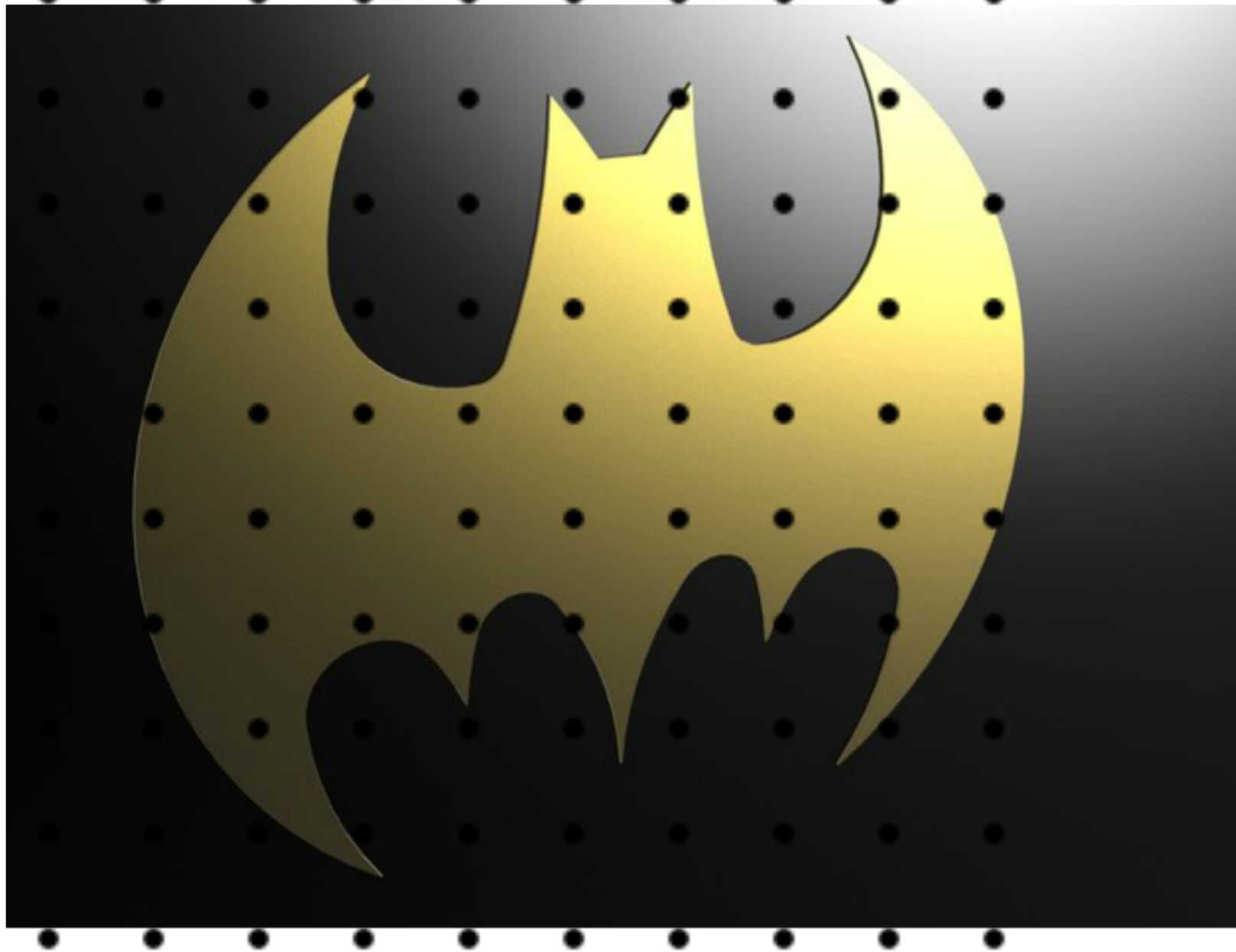


graph paper or dot grid



$$\begin{aligned} \text{Area} &= [\text{dots within} + 1/2(\text{dots on boundary})] \times \text{dot value} \\ &= [75 + 1/2(18)] \times 1 \text{ km}^2 = 84 \text{ km}^2 \end{aligned}$$



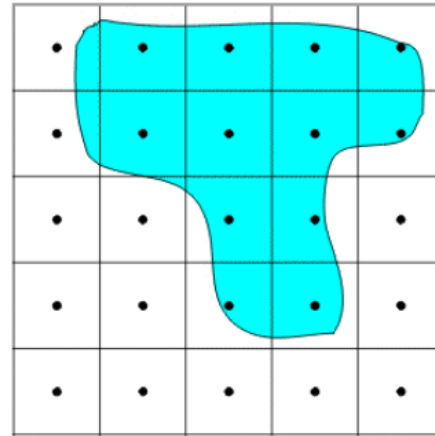
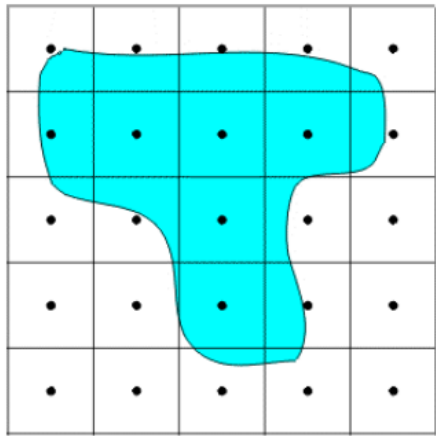


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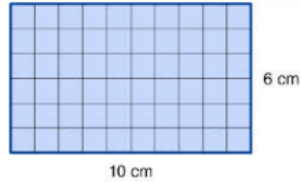


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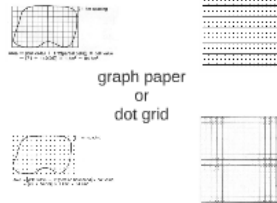
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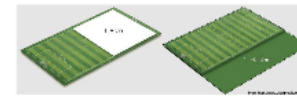
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