

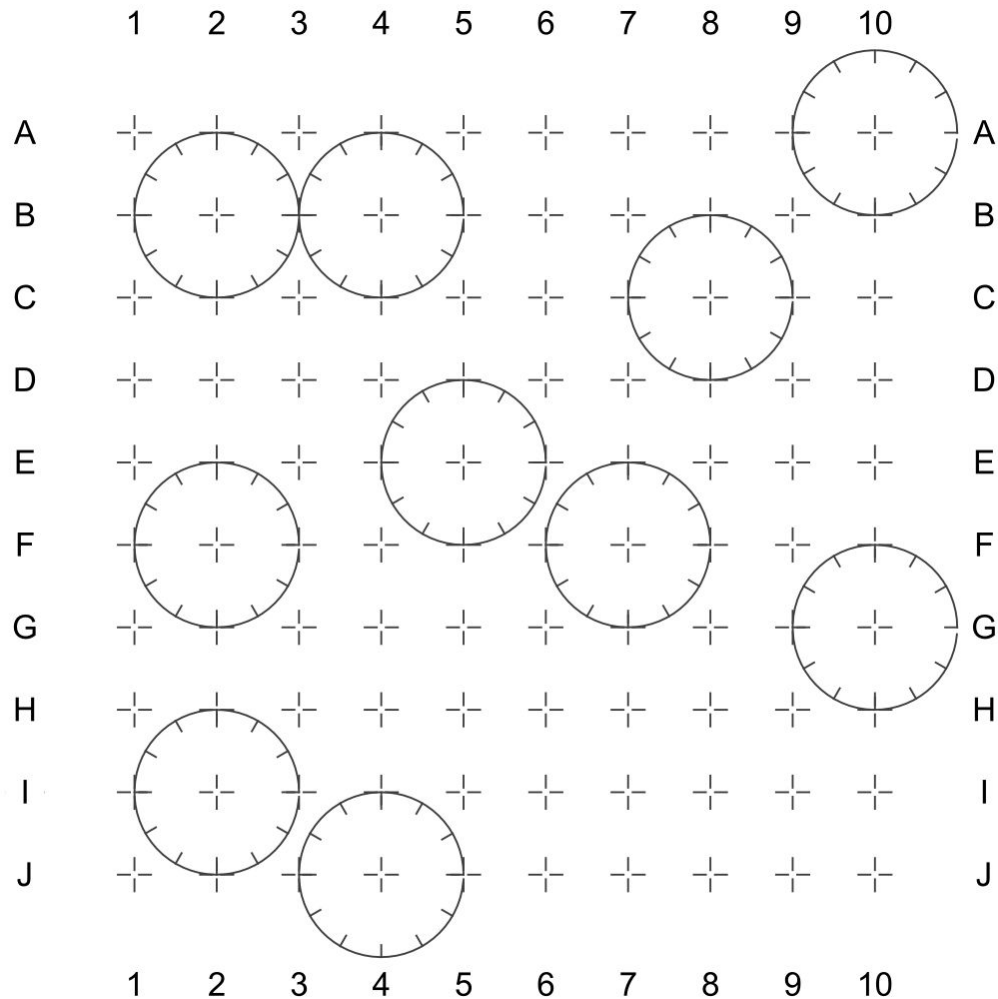
Consent form/pre questionnaire

- lights
- camera
- handedness

Introduction

- ~90 minutes : gift card at the end
- Participation is voluntary, you can stop at any point

Tasks: interpreting different visualizations of elevation data



- grid of crosshairs
- circle "clocks" (12:00 noon is north)

- Point J1?
- Circle A10?
- 6:00 position in A10?

Final Notes

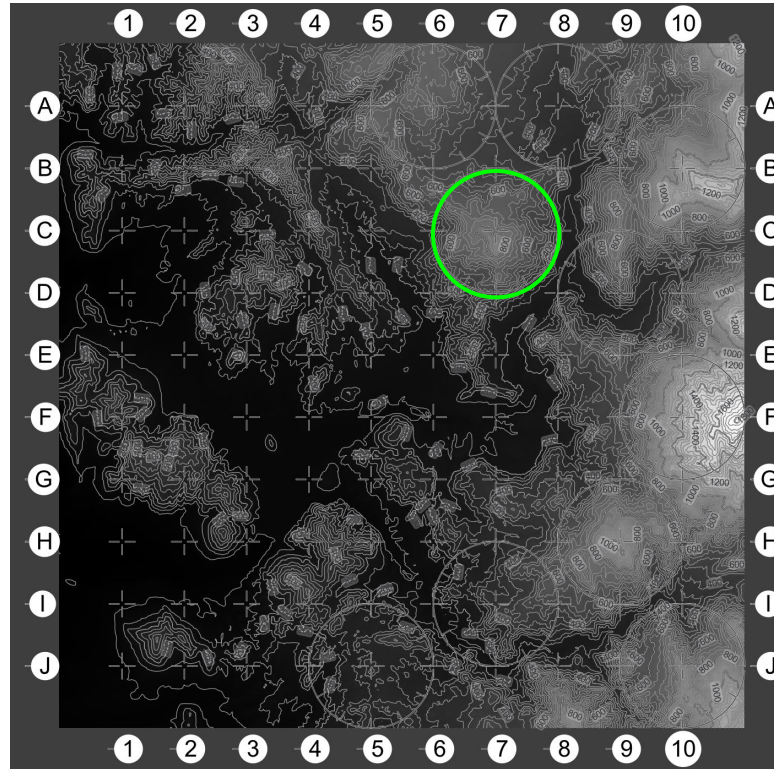
- Prompts are displayed on iPad
 - press “Start” when you are ready to begin
- State all answers clearly verbally - I will confirm “OK”
- Press “Stop” on iPad when you have a final answer
- Try to answer the prompt in <1 minute
 - Audio and visual prompts will be provided at 0:30, and 1:00 onwards.
 - If you find yourself beyond the 1:00 mark, try to finish up.
 - Give it your best answer; no need to be perfect!
- Questionnaires between blocks

Questions?

2D / Advect

Advect: Trace the path downhill from the given point until the path intersects the surrounding circle. What heading (o'clock) does the path intersect the circle?

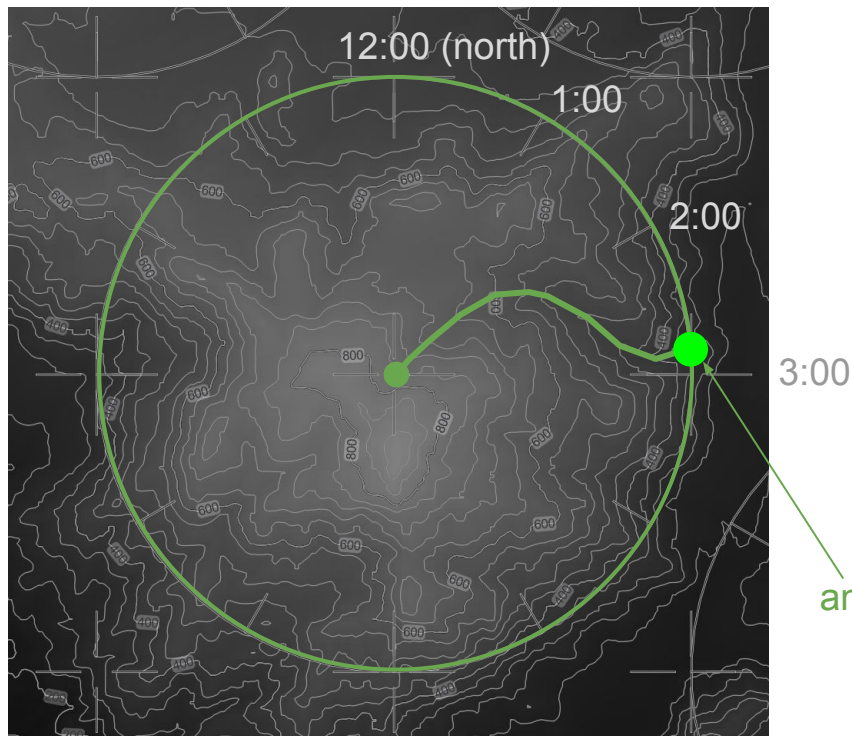
- **Given:** Point/Circle ID (e.g., C7)
- **Report:** O'clock heading where the downhill path intersects the circle



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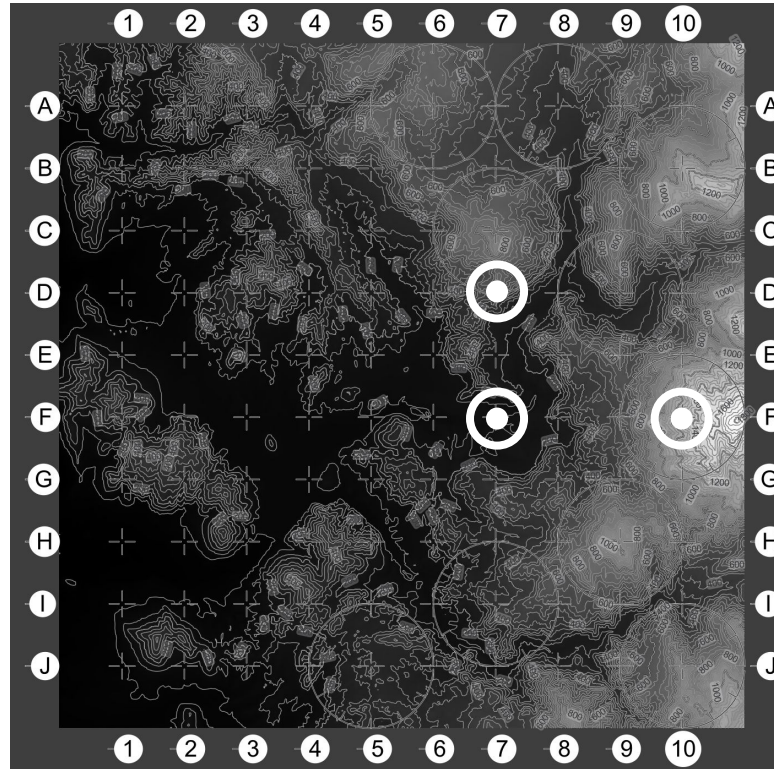


- Start in center
 - Follow path downhill to circle edge
 - imagine a tiny ball rolling downhill
 - steep downhill = close contour lines
 - follow path perpendicular to lines
 - Report answer as o'clock
 - 12:00 is NORTH
 - can be in between hours
 - specify in quarter-hours
 - “half past 12”
 - “quarter past 1”
- answer:
- “quarter to 3”

2D / Compare

Compare: Locate the three given points and determine which has the lowest elevation.

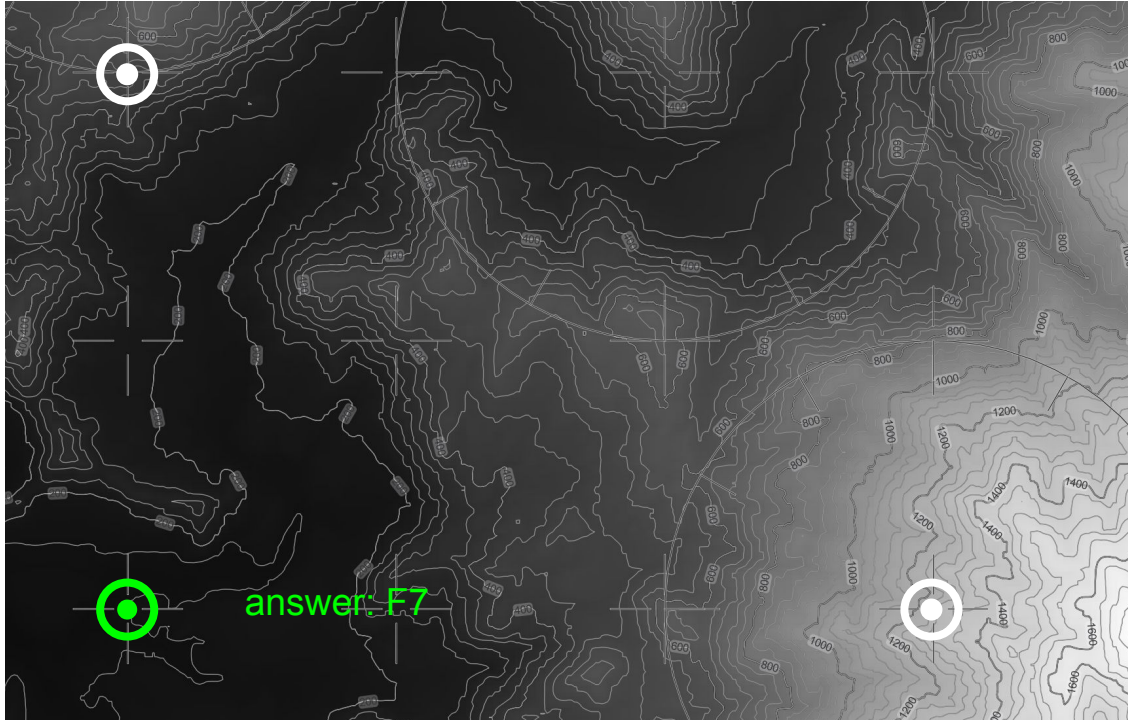
- **Given:** 3 Point IDs (e.g., D7, F7, F10)
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- Use center of crosshair
- Use labeled contour labels and colormap



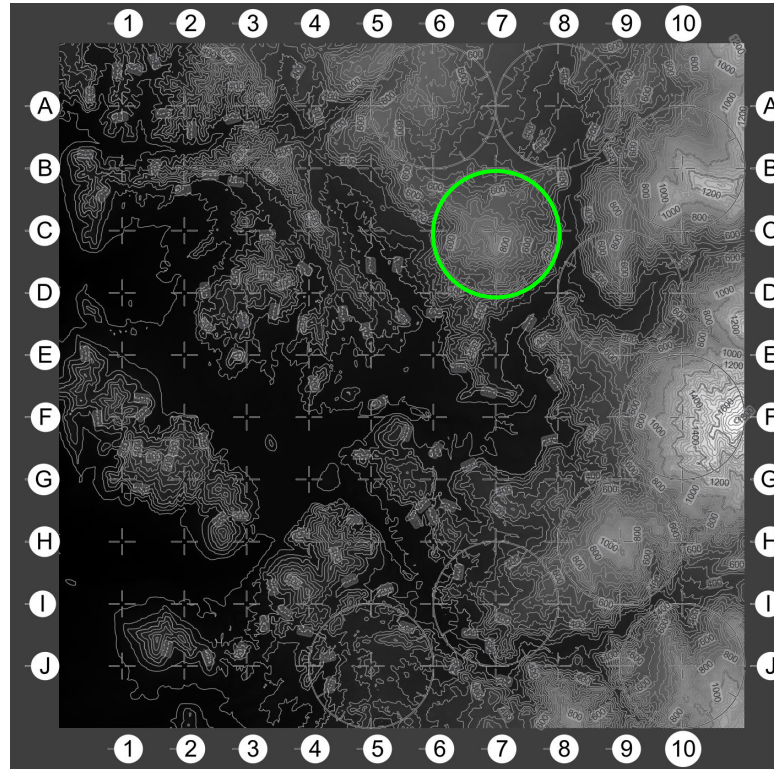
Low Elevation

High Elevation

2D / Range

Range: Indicate the minimum and maximum elevation inside the given circle.

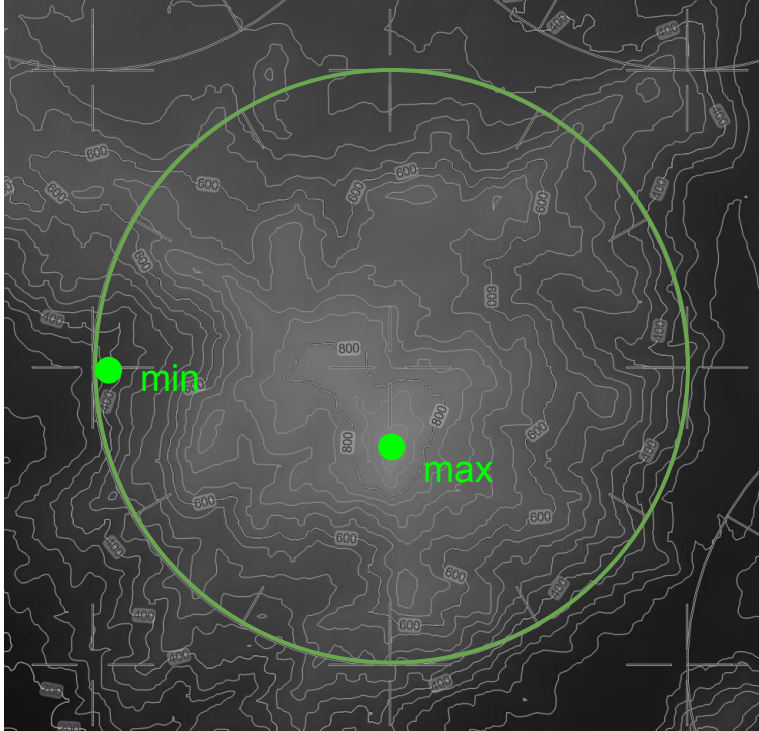
- **Given:** Point/Circle ID (e.g., C7)
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2D / Range

Range: Indicate the minimum and maximum elevation inside the given circle.

- **Given:** Point/Circle ID (e.g., C7)
- **Report:** Minimum/Maximum elevation inside the circle surrounding the given point



- Search entire area within given circle
- Use labeled contour labels and colormap
 - always 5 unlabeled contour lines between
 - either 20m or 40m between
 - try to answer within 100m

answer:

- min: 330m
- max: 885m



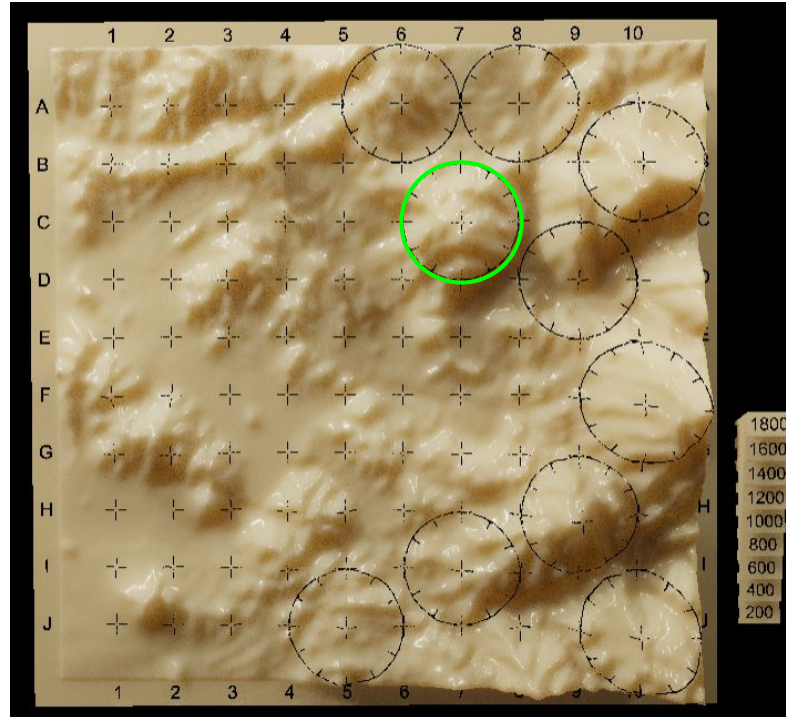
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VR / Advect

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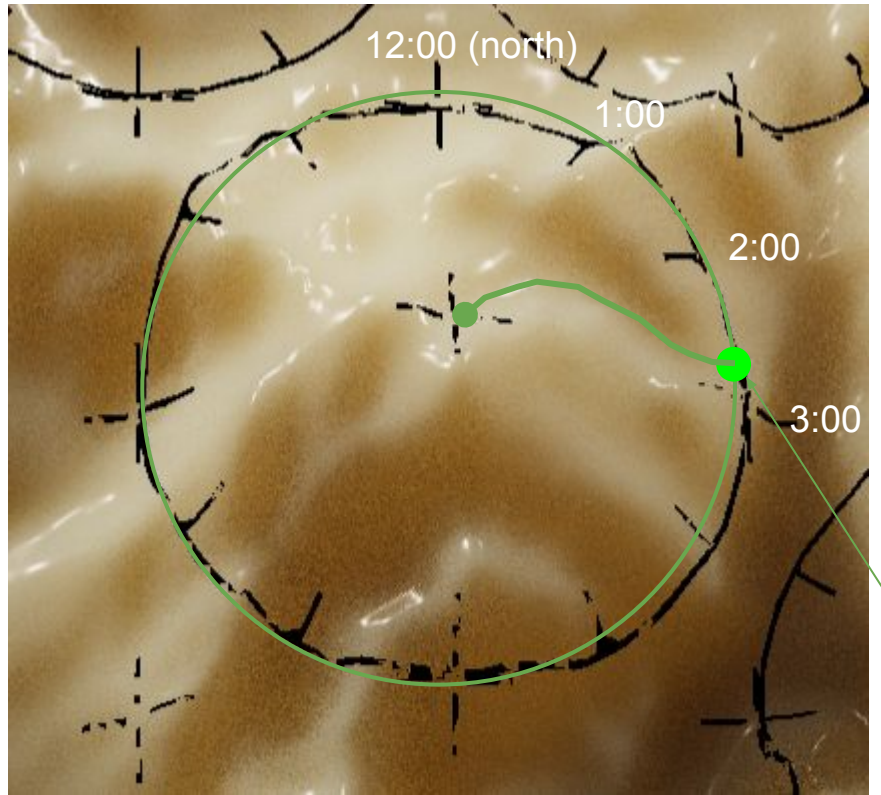
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- Start in center
- Follow path downhill to circle edge
 - imagine a tiny ball rolling downhill
 - downhill = downhill
- Report answer as o'clock
 - 12:00 is NORTH
 - can be in between hours
 - "half past 12"
 - "quarter to 3"

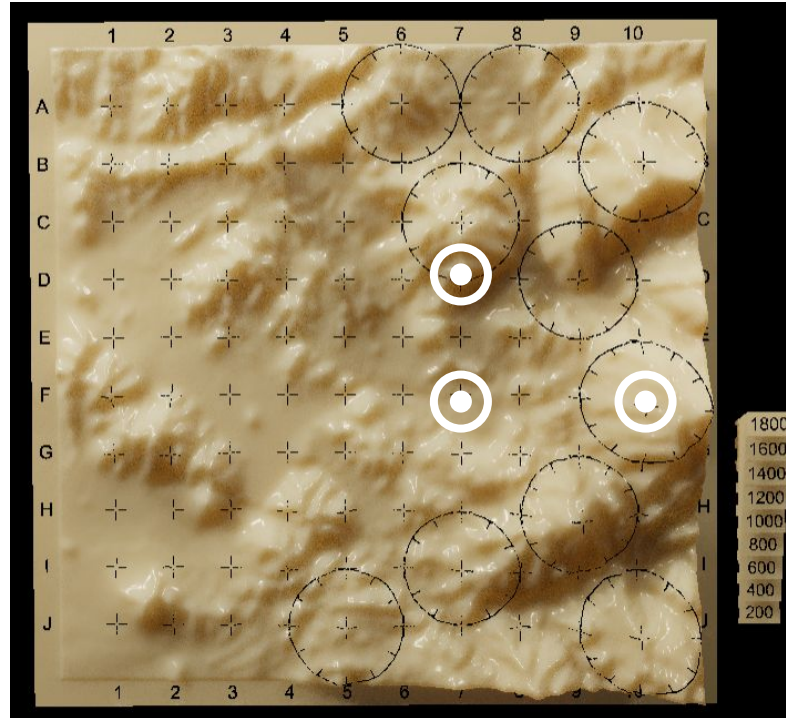
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VR / Compare

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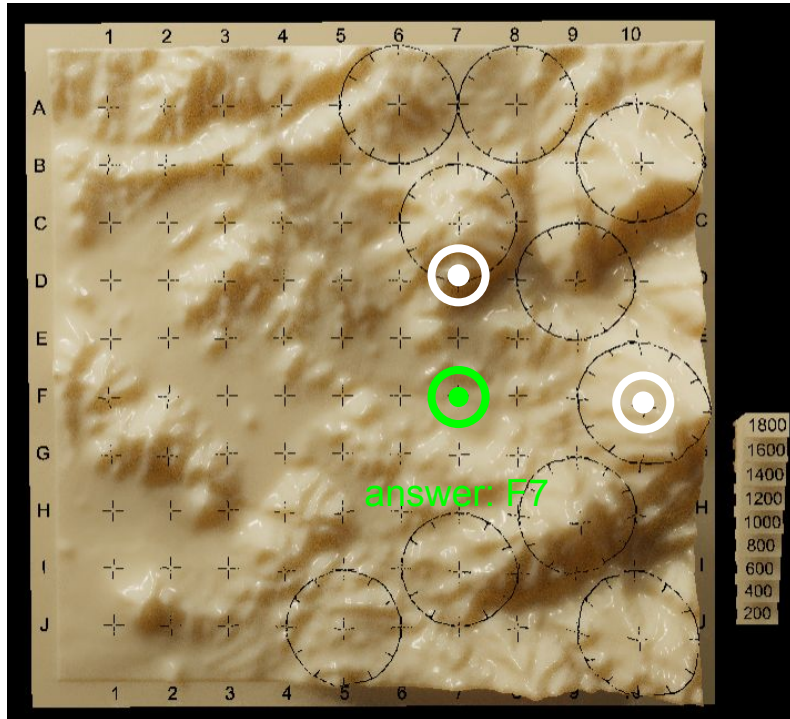
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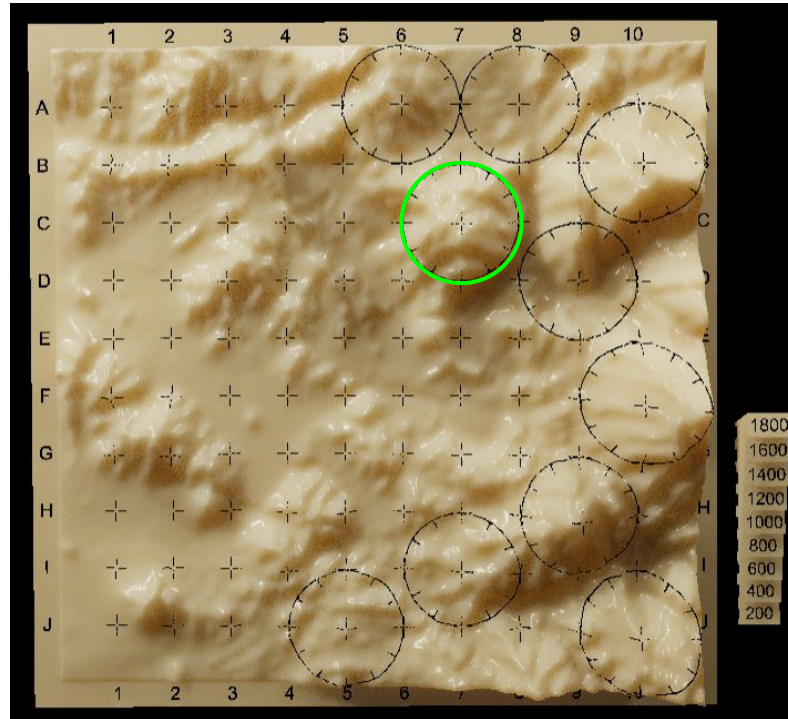


- Use center of crosshair
- Can use legend

VR / Range

Range: Indicate the minimum and maximum elevation inside the given circle.

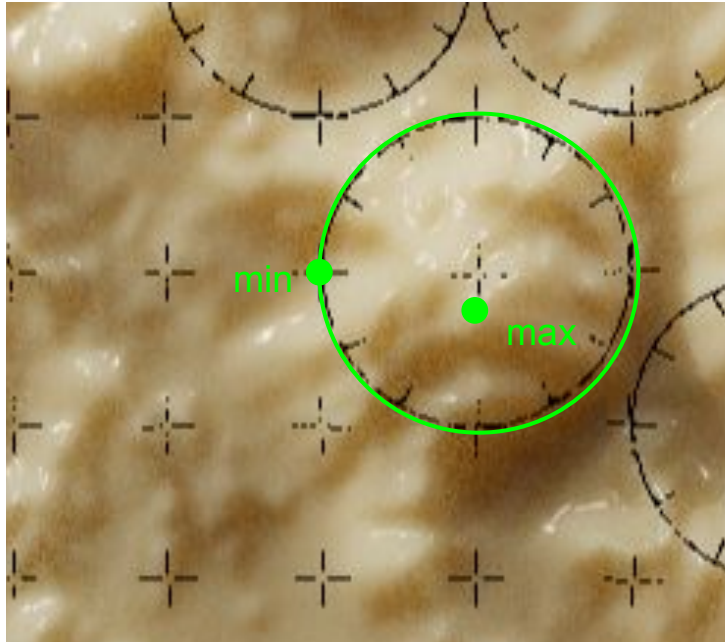
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- Search entire area within given circle
- Use legend to find numeric answers
 - try to answer within 100m

answer:

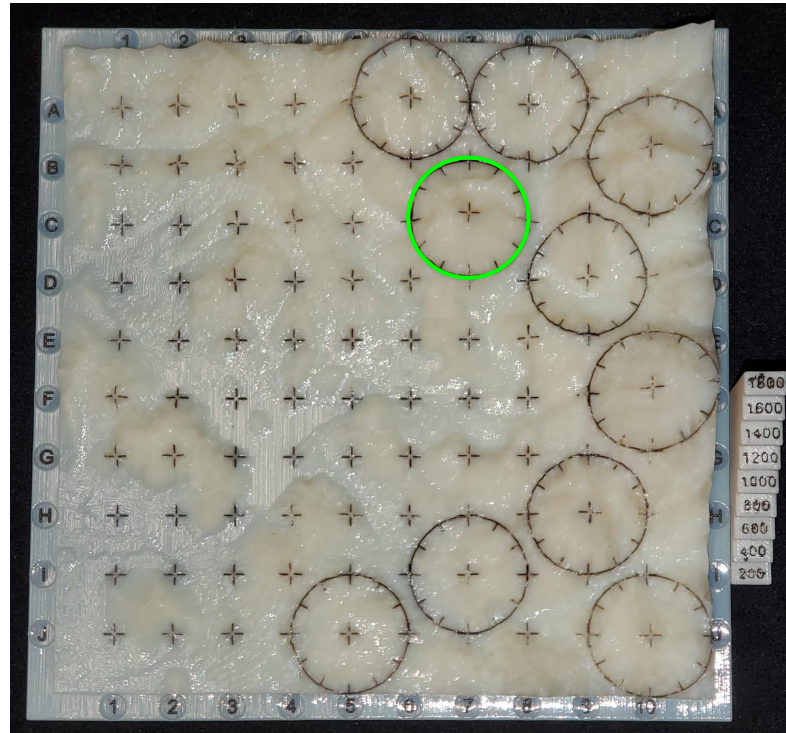
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Physical / Advect

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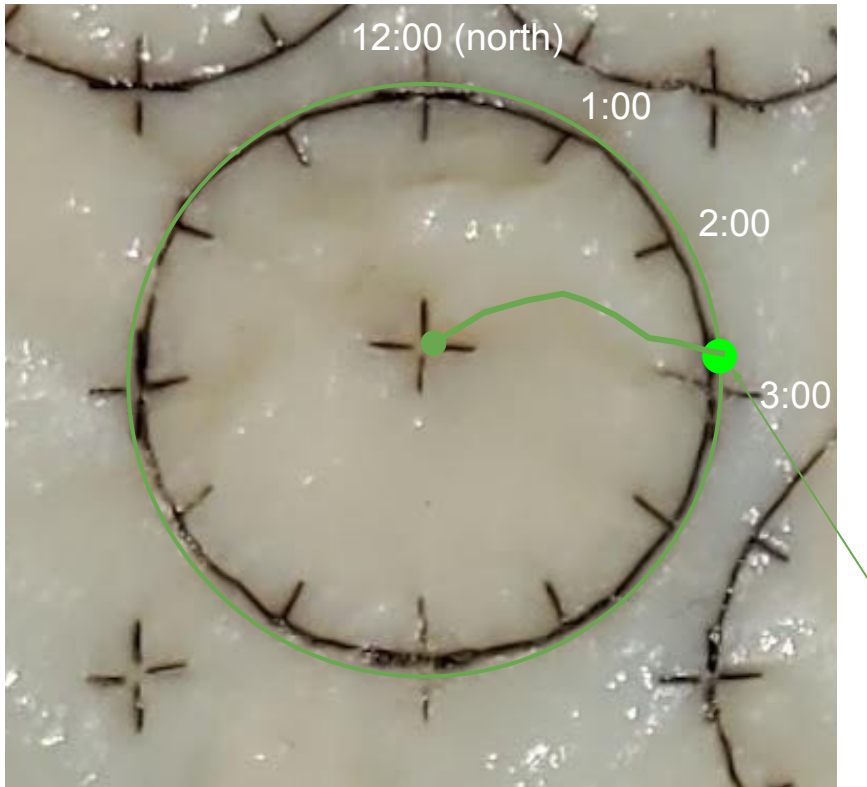
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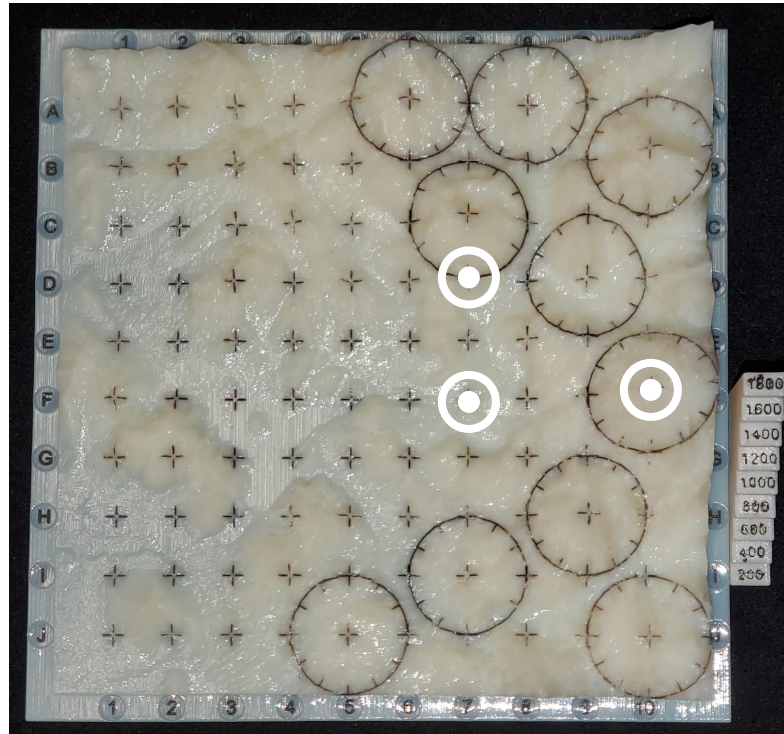
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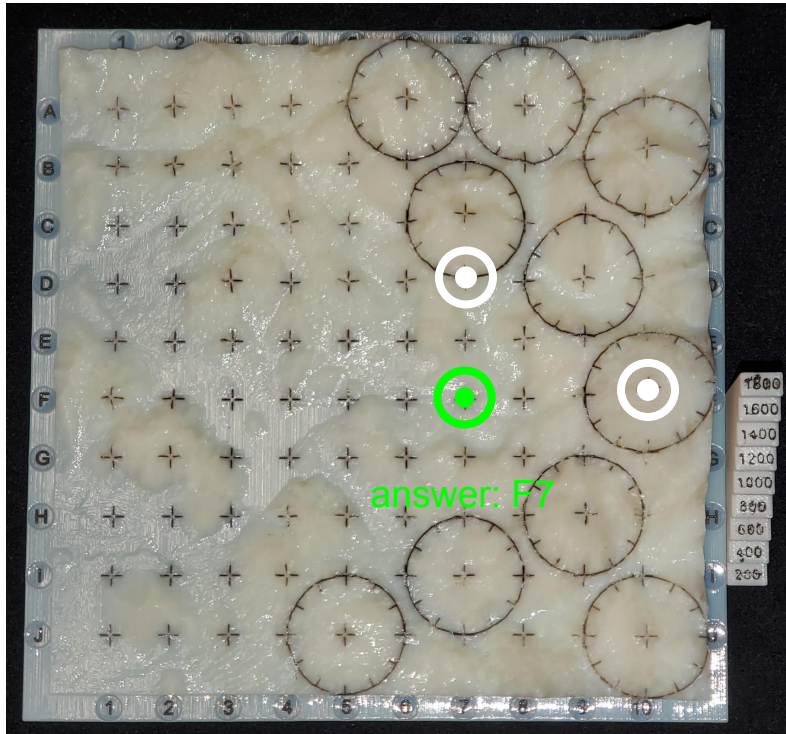


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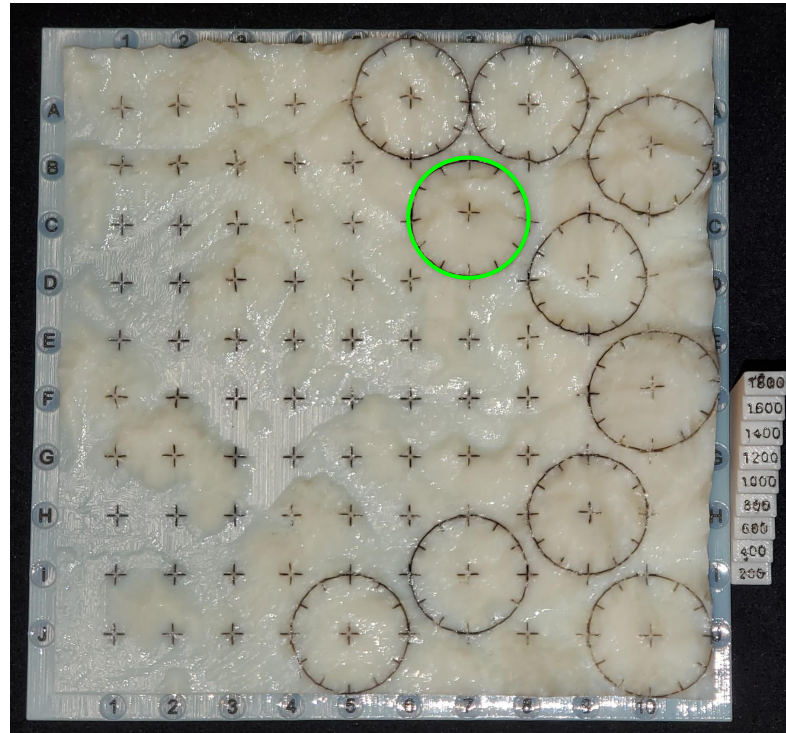
- Use center of crosshair
- Can use legend



Physical / Range

Range: Indicate the minimum and maximum elevation inside the given circle.

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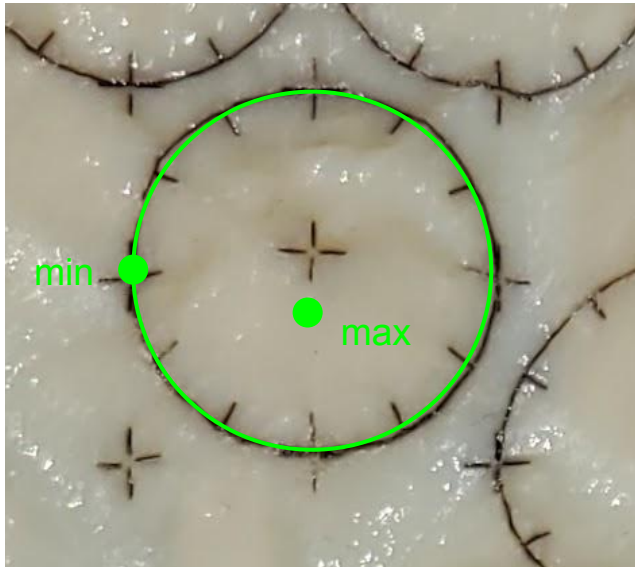


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