

The View from Here

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Council of A

estraia 6–10 April

Brisbane, F

Australian Government







Brisbane, Australia 6-10 April

The Plan

- Australia Tertiary Ed & Surveying Industry background
- Decreasing number of students (and academics) in the Geospatial programmes;
- Post Covid wellbeing
- Artificial Intelligence in Education (proper usage or misuse);













Australian Governmen





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SA

WA

QLD



Brisbane, Australia 6-10 April

NSW

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Australia – Government & Governance

- Federal
 - Unis State constituted
 - Federally funded
 - Courses demand driven
 - 65% Govt / 35% Student
 - Higher Education Contribution Scheme (HECS)
- Unis Self-accrediting
 - **TEQSA** regulated
 - Higher Education Standards Framework
- Surveying
 - 8 programs





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Australian Pepulation

Surveyors Australia







Brisbane, Australia 6-10 April

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Surveying Industry

- Private Sector
 - Property Development (Cadastral)
 - Construction & Engineering
 - Mining
 - Hydrographic & Photo
- Government Sector (State & Fed)
 - Geodesy
 - Hydrograpic







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Leica Geosystems



Surveyors Australia







Brisbane, Australia 6–10 April









Brisbane, Australia 6-10 April

Industry – Institution Partnership

Industry Outreach Campaigns •



Touchpoints

Web presence

WORKING

WEEK 2025

- Major Career
- High School
- Teacher Proi SVY1010 Fundamental Metrology for Surveyors
- Surveying Sc SVY1110 Introduction to Global Navigation Satellite Systems
- Head start course
- Work Experience

ORGANISED BY

FIG

Geospatial Council of Australia

UniSQ Future Surveyor Camp



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Leica

Yes











Collaboration, Innovation and Resilience: Championing a Digital Generation



Brisbane, Australia 6-10 April







Brisbane, Australia 6-10 April

Academic Staff

- UniSQ 11 FT Surveying Academics
 - 3 Staff 20+ years
 - 15 20 years – 3 Staff
 - 3 Staff 5 – 15 years
 - 2 Staff < 5 years
- Currency?









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Brisbane, Australia 6-10 April

FI

COVID Aftermath

WORKING

WEEK 2025

AND

International Students (Aus) 24 **Financial Covid** 32% FTE in Australia International 23 % all revenue 14.7% (2004) – 24% (2019) 2019 Fed Budget ~17% reduction per students EnrolmentStatus Domestic Personal Covid International – Dingle et al 2024 20 19 2020 2022 2019 2021 Cohort Surveyors Australia Leica Uni**SQ** esri Geospatial Council of Australia C CHCNAV ORGANISED BY FIG PLATINUM SPONSORS THE COLENCE OF WHEE Australian Government

Locate25



AND



Collaboration, Innovation and Resilience: Championing a Digital Generation



Thinking I at me organize the original to visualize the nation better. Row 1: Column 3: A diagonal line from hottom left to ton right with a half circle at ton end. The half circle is shaded a strines - Column 3: A diagonal line from hottom left to ton right with a half circle at tone at the half circle is shaded a strine at hottom end. The half circle is shaded a strine at hottom with a half circle is shaded in strine at hottom with a half circle is shaded at the hottom with a half circle is shaded at the hottom with a half circle is shaded in strine at hottom with a half circle is shaded at the hottom with a half circ black. Row 2: - Column 1: A diagonal line from top left to bottom right with a half circle at bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from top left to bottom right with a half circle is shaded in strpes. Row 3: - Column 1: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: A diagonal line from bottom left to bottom end. The half circle is shaded in strpes. Row 3: - Column 3: to top right with a half circle at bottom end. The half circle is shaded in stripes. - Column 2: A diagonal line from top left to bottom-left to top-right. Top-et to bottom right with a half circle is shaded in black. - Column 3: This is what we need to determine. III look for patterns in different aspects: 1. Diagonal direction: - Row 1: bottom-left to top-right, top-eft to bottom-left to top-right. Top-eft to bottom-left to top-right. hottom-left to ton-right ton-left to bottom-right. Row 3: bottom-right to bottom bottom. Row 3: bottom ton - Row 3: bottom ton clear pattern for the half-circle position based on rows. Let me check columns. - Column 1: top, bottom, bottom, bottom, top - Column 2: bottom, top - Column 3: bottom, top, ? Still not seeing a clear pattern. Let me try to look at it as a 3x3 grid and see if there's a pattern across the entire grid. 3. Shading: - Row 1: not shaded, striped, black, - Row 2: black, not shaded, striped, black, - Row 3: striped, black, ? There seens to be a pattern here: not shaded -- striped -- black -- not shaded -- ... Looking at this pattern, if Row 3, Column 1 is striped and Column 2 is black, then Column 3 should be not shaded. Let me examine the options again: Option A: A diagonal line from top left to bottom right with a half circle is not shaded. Let me examine the options again: Option A: A diagonal line from top left to bottom right with a half circle is not shaded. not shaded Ontion C: A diagonal line from ton left to bottom right with a half circle is shaded in strines. Ontion D: A diagonal line from bottom left to ton right with a half circle is shaded in strines. Ontion D: A diagonal line from ton tel to bottom right with a half circle at bottom end. The half circle is not shaded. Based on the diagonal direction pattern, we want a diagonal from bottom-left to top-right. Based on the shading pattern, we want a diagonal from bottom-left to top-right are B, D, and E. Options that have a not shaded half-circle are A, B, and F. The intersection of these two sets is Option B. A diagonal line from bottom-left to top-right are B, D, and E. Options that have a not shaded half-circle are A, B, and F. The intersection of these two sets is Option B. A diagonal line from bottomleft to top right with a half circle at top end. The half circle is not shaded. However, we still need to determine if the half-circle should be at the top or bottom end. Let me look for a pattern in the half-circle positions again. Let me see if there's a pattern across the grid as a whole: 1. Row 1, Column 1: bottom 3. Row 1, Column 3: bottom 4. Row 2, Column 1: bottom 5. Row 3, Row 1, Column 3. Row 4, Column 3. Row 4, Column 5. Ro 2. Column 3. too 7. Row 3. Column 1: bottom 8. Row 3. Column 2: too 9. Row 3. Column 3: ? I still don't see a clear pattern in the half-circle positions. Let me try a different approach. It could be that there's a relationship between the diagonal direction and the half-circle position. Let me check: - When the diagonal is from bottom-left to too-richt. the half-circle is at the bottom in 3 cases. - When the diagonal is from top-left to bottom-right, the half-aircide is at the bottom in 2 cases. Again, no clear pattern here. Let me try one more approach to bo-right, top, not shaded - Column 2: Top-left to bottom-right, bottom, striped - Column 3: Bottom-left to top-right, bottom, black Row 2: - Column 1: Top-left to bottom-right, bottom, black - Column 1: Top-left to bottom-right, bottom, not shaded - Column 3: Top-left to bottom-right, top, striped Row 3: - Column 1: Bottom-left to top-right, bottom, striped Row 3: - Column 1: Bottom-left to top-right, bottom, black - Column 3: Top-left to bottom-right, top, striped Row 3: - Column 1: Bottom-left to top-right, bottom, striped - Column 3: Top-left to bottom-right, top, striped Row 3: - Column 1: Top-left to bottom-right, bottom, striped Row 3: - Column 1: Bottom-left to top-right, bottom, black Row 2: - Column 1: Top-left to bottom-right, top, striped Row diagonal direction alternates. The half-circle position is too, then bottom. The shading oces from not shaded to stribed to balack, Row 2. The diagonal direction alternates. The half-circle position is bottom, then bottom. The shading oces from black to not shaded to stribed to stribed to balack. Row 2. The diagonal direction alternates. The half-circle position is bottom to too (so far). The shading oces from black to not shaded to stribed to stribed to stribed to balack. Row 2. The diagonal direction alternates. The half-circle position is bottom too (so far). The shading oces from black to not shaded to stribed to stribed to stribed to stribed to stribed to balack. Row 2. The diagonal direction alternates (so far). The shading oces from black to not shaded to stribed to stribed to stribed to stribed to stribed to balack. Row 2. The diagonal direction alternates (so far). The shading oces from black to not shaded to stribed to stribed to stribed to stribed to balack. Row 2. The diagonal direction alternates (so far). The shading oces from black to not shaded to stribed t stred to black (so far). Based on these row patterns, for Row 3, Column 3, I would expect: Diagonal direction: Bottom-left to top-right (alternating from Columns: Column 1: The diagonal stred would be appressibly not shaded (life shading follows the pattern striped would be appressible to the pattern striped would be appressible direction atternates. The half-circle position goes top, bottom, bottom, bottom, bottom, back, striped. Column 3: The diagonal direction atternates. The half-circle position goes bottom, bottom, to the shading goes triped, not shaded, black. Column 3: The diagonal direction atternates (so far). The shading goes bottom to tor (so far) based on these column patterns, for Row 3, Column 3, I would expect - Diagonal direction: Biotrandel to top-right (alternating from Row 3, Column 2) - Hall-circle position. Possibly bottom (if there's a pattern like bottom), top, bottom for Column 3) - Hall-circle position. Possibly bottom (if there's a pattern like bottom) is consistently bottom-left to top-right for Row 3, Column 3. The half-circle position could be either top or bottom, and the shaded in stripes. These are the only option B: A diagonal line from bottom left to top right with a half circle is not shaded. Option E: A diagonal line from bottom left to top right with a half circle is not shaded. Option E: A diagonal line from bottom left to top right with a half circle is not shaded. Option B: A diagonal line from bottom left to top right with a half circle is not shaded. Option B: A diagonal line from bottom left to top right with a half circle is not shaded. with a diagonal from bottom-left to top-right and a half-circle at the top. Based on the shading bettern, I believe Option B is more likely to be correct as the half-circle should be not shaded -> stribed -> black -> not had d - u l we look at the entire grid in order (Row 1, Column 2; etc.), we have: 1. Not shaded 2. Striped 3. Black 4. Black 5. Not shaded 6. Striped 7. Striped 3. Black 4. 9. Following this pattern, the 9th position should be Not shaded. This aligns with Option B: A diagonal line from bottom left to bor more than a for more than a formation of the striped 3. Black 4. Black 5. Not shaded 6. Striped 3. Black 4. Striped 3. Black 5. Striped 3. Black 4. Striped 3. B the half-circle position. In the grid, there are a total of 5 half-circles at the bottom and 3 at the top (before the last position). There doesn't seem to be a strict pattern three. Let me try one more time by focusing on the pattern in each row and column. Row 1: Bottom-ight, top, not shaded | Top-left to bottom-right, bottom, black Row 2: Top-left to bottom-right, bottom strice doesn't seem to be a strict pattern three. Let me try one more time by focusing on the pattern in each row and column. Row 1: Bottom-left to top-right, top, not shaded | Top-left to bottom-right, bottom, black Row 2: Top-left to bottom-right, bottom, black Row 2: Top-left to bottom-right, bottom striped | Bottom-left to top-right, top rot shaded | Top-left to bottom-right, bottom, black Row 2: Top-left to bottom-right, bottom striped | Bottom-left to top-right, bottom, black Row 2: Top-left to bottom-right, bottom, black Row 2: Top-left to bottom-right, bottom striped | Bottom-left to top-right, bottom striped | Bottom-left to top-right, bottom, black Row 2: Top-left to bottom-right, bottom striped | Bottom-left to top-right, bottom striped | Bottom Bottom-left to bot-right, bottom, not shaded | Too-left to bottom-right, bottom, striped Row 3: Bottom-left to bottom-right, bottom, striped I Too-left to bottom-right, bottom, striped black Column 3; Bottom-left to top-right, bottom, black | Top-left to bottom-right, top, striped |? For the diagonal direction, there's a clear alternating pattern in both rows and columns. For Row 3, Column 3, it should be a diagonal from bottom-left to top-right. For the half-circle position, it's less clear. But I notice that in Row 3, It goes from bottom to top so far, and in Column 3, it goes from bottom to top so far. and in Column 3, it should be a diagonal from bottom-left to top-right. For the half-circle position, it's less clear. But I notice that in Row 3, It goes from bottom to top so far, and in Column 3, it goes from bottom to top so far. This might suggest a top position for Row 3, Column 3. For the shading, there's a clear pattern in both rows and columns. In Row 3, it goes from striped to black so far, which suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped so far, which also suggests not shaded for the next one. In Column 3, it goes from black to striped the top that is not shaded. This matches Option B: A diagonal line from bottom left to top right with a half circle at top end. The half circle at top end. The half circle at top, not shaded Position (1.1): Diagonal bottom-left to top-right, half-circle at top end. The half circle at top end. The half circle at top ends to not shaded. Let me look at one more approach. Perhaps there's a pattern related to the position in the grid: Position (1.1): Diagonal bottom-left to top-right, half-circle at top end. The half circle at top end. bottom-left to top-right, half-circle at bottom, black Position (2,1): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,1): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,1): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,1): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left to bottom-right, half-circle at bottom, black Position (2,3): Diagonal top-left top-lef Position (3,3):? I don't see any clear pattern based on the grid position. But the patterns in the rows and columns, especially for the diagonal direction and shading, point towards a diagonal from bottom-left to top-right with a not shaded half-circle. As for the half-circle position, it could be top or bottom, but based on the patterns in Row 3 and Column 3, it's more likely to be at the top. Actually, let me try to see if there's a pattern in the half-circle position based on both the position in the grid and the diagonal half-circle at bottom Position (1.2). Too-left to bottom-right diagonal half-circle at bottom Position (2.1). Too-left to bottom-right diagonal half-circle at bottom Position (2.1). at bottom Position (2,3): Top-left to bottom-right diagonal, half-circle at top Position (3,1): Bottom-left to top-right diagonal, half-circle at ? I'm still not seeing a clear pattern for the half-circle position (3,1): Bottom-left to top-right diagonal, half-circle at ? I'm still not seeing a clear pattern for the half-circle position based on the diagonal, half-circle at ? I'm still not seeing a clear pattern for the half-circle position (3,1): Bottom-left to top-right diagonal, half-circle at ? I'm still not seeing a clear pattern for the half-circle at ? I'm still not seeing a clear pattern for the half-circle at ? I'm still not seeing a clear pattern for the half-circle at ? I'm still not seeing a right diagonal, there are 2 half-circles at the top and 2 at the bottom-left to top-right diagonal, there are 1 at the top and 3 at the bottom. Wait, I think I'm missing something here. Let me re-evaluate each of the given options to ensure I'm considering the correct diagonal directionality. Option A: A diagonal line from top left to bottom-left to top-right diagonal, there are 1 at the top and 3 at the bottom. Wait, I think I'm missing something here. Let me re-evaluate each of the given options to ensure I'm considering the correct diagonal directionality. Option A: A diagonal line from top left to bottom-left to bottom-left to top-right diagonal, there are 1 at the top and 3 at the bottom. Wait, I think I'm missing something here. Let me re-evaluate each of the given options to ensure I'm considering the correct diagonal directionality. Option A: A diagonal line from top left to bottom-left to bottom-lef diagonal line from bottom left to too right with a half circle at too end. The half circle is shaded in black. Onlion F: A diagonal line from bottom left to bottom right with a half circle at too end. The half circle is shaded in black. circle is shaded in stripes. Option F: A diagonal line from top left to bottom right with a half circle at bottom end. The half circle is not shaded. Let me try one more approach by focusing on the pattern in each row, column, and diagonal of the 3x3 grid. Let's visualize this in a more abstract way. Row 1: [D1/T/N][D2/B/S][D1/B/B] Row 2: [D2/B/B][D1/B/N][D2/T/S] Row 3: [D1/B/S][D2/T/B] [?] Column 1: [D1/T/N][D2/B/B] [D1/B/S] Column 2: [D2/B/S] [D1/B/N] [D2/T/B] Column 3: [D1/B/B] [D2/T/S] [?] Where: - D1: Diagonal from bottom-left to top-right - D2: Diagonal from top-left to bottom-right - T: Half-circle at top - B: Half-circle at bottom - N: Not shaded - S: Striped - B: Black Looking at this, I notice that if we rotate the grid 180 degrees, the pattern remains the same (with D1 becoming D2, Tbecoming B, and the shading remaining the same). For the diagonal direction, there's a clear alternating pattern in both rows and columns. For Row 3, Column 3, it should be D1 (diagonal from bottom-left to top-right). For the half-circle position, I'm noticing that in Row 1, the T's and B's follow a pattern of T→B→B. In Row 2, it's B→B→T. In Row 3, it's B→T→?. It could be T or B, but it feels like it should be D1 (diagonal from bottom-left to top-right). For the half-circle position, I'm noticing that in Row 1, the T's and B's follow a pattern of T→B→B. In Row 2, it's B→T→?. It could be T or B, but it feels like it should be T to follow the pattern. Actually I think a useful way to determine what's supposed to be filled in for row 3, column 3 is to see if you can represent the pattern as a function of the row and column position (i, j) is determined by some rule that's a function of i and j. Let's try to find a rule for each of the three aspects (diagonal direction, half-circle position, and shading) as a function of the row and column (j): 1. Diagonal direction: - If ((+ j) d_{i} (b) d_{i} (b) d_{i} (b) d_{i} (b) d_{i} (b) d_{i} (c) d_{i (1/2) = 27): ? I'm still not seeing a clear pattern for the half-circle position based on these functions. Let me try to look at the pattern in a different way, wait, maybe it's about parity of the total number of half circles at the top. So far, we have 3 half-circle position based on these functions. Let me try to look at the pattern in a different way, wait, maybe it's about parity of the total number of half circles at the top, not-shaded, followed by (1, 2) = D2, bottom, striped, fo back (3, 2) = D2, top, black, followed by (3, 3) = ? I'm not set and a function of (i, j) for the shading. Ve have 3 possible shadings: Not shaded (N), Striped (S), and Black (B). Let's assign them values: N=0, S=1, B=2. Now, let's see if we can find a function that maps (i, j) to the shading. - Position (1, 2): Striped (1) - Position (1, 3): Black (2) - Position (2, 1): Black (2) - Position (2, 2): Not shaded (0) - Position (3, 1): Striped (1) - Position (3, 2): Black (2) - Position (3, 3): ? I see a pattern here! If we use the function ((i + i) - 2) mod 3 we get the shading (where mod 3 gives the remainder after dividing by 3): - Position (1, 1): (1 + 1 - 2) mod 3 = 0 mod 3 = 0 (Not shaded) - Position (1, 2): (1 + 2 - 2) mod 3 = 1 (Not shaded) - Position (1, 3): ? I see a pattern here! If we use the function ((i + i) - 2) mod 3), we get the shading (where mod 3 gives the remainder after dividing by 3): - Position (1, 1): (1 + 1 - 2) mod 3 = 0 (Not shaded) - Position (1, 2): (1 + 2 - 2) mod 3 = 1 (Not shaded) - Position (1, 3): ? I see a pattern here! If we use the function ((i + i) - 2) mod 3), we get the shading (where mod 3 gives the remainder after dividing by 3): - Position (1, 1): (1 + 1 - 2) mod 3 = 0 (Not shaded) - Position (1, 2): (1 + 2 - 2) mod 3 = 1 (Not shaded) - Position (1, 3): (1 + 3 - 2) mod 3 = 2 (Black). - no, this should be Not shaded. I'm going to change the values 1 assigned from the previous N=0, S=1, B=2 to a new mapping and see if that helps: What about this function: ((i + j) mod 3/2 Let's assign N=1, S=2, B=0: -Position (1, 1): (1 + 1) mod 3 = 2 (Not shaded. III try more mappings. What about N=2, S=0, B=1? - Position (1, 1): (1 + 1) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 2): (1 + 2) mod 3 = 3 mod 3 = 0 (Striped)... ro, this should be Not shaded. III try more mappings. What about N=2, S=0, B=1? - Position (1, 1): (1 + 1) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 2): (1 + 2) mod 3 = 3 mod 3 = 0 (Striped)... ro, this should be Not shaded. III try more mappings. What about N=2, S=0, B=1? - Position (1, 1): (1 + 1) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 2): (1 + 2) mod 3 = 3 mod 3 = 0 (Striped)... ro, this should be Not shaded. III try more mappings. What about N=2, S=0, B=1? - Position (1, 1): (1 + 1) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 2): (1 + 2) mod 3 = 3 mod 3 = 0 (Striped)... ro, this should be Not shaded. III try more mappings. What about N=2, S=0, B=1? - Position (1, 1): (1 + 1) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 2): (1 + 2) mod 3 = 3 mod 3 = 0 (Striped)... ro, this should be Not shaded. III try more mappings. What about N=2, S=0, B=1? - Position (1, 1): (1 + 1) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 3): (1 + 3) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 3): (1 + 3) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 3): (1 + 3) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 1): (1 + 1) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 3): (1 + 3) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 3): (1 + 3) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 3): (1 + 3) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 3): (1 + 3) mod 3 = 2 (Not shaded). Yes this is what we want. - Position (1, 3): (1 + 3) mod 3 = 2 (Not shaded). Yes this is what we want. - Position mod 3 = 1 (Black) Yes this is what we want - Position (2, 1): (2 + 1) mod 3 = 3 mod 3 = 0 (Stringed) No this should be Black It's quite difficult to find a function that works for shading But actually | observe a pattern If we look at the entire orid and read it row by row (so: (1, 1), (1, 2), (1, 3), (2, 1), ...) the shading seems to follow the sequence: N \rightarrow S had a contract of the problem and the problem and the problem, making sure have the D1, D2, top, bothm, strice the problem specification one or there. Row the contract of the problem specification one or the contract of the problem specification one of the contract of the problem specification one or the contract of the problem s left to bottom right with a half circle at bottom end. The half circle is shaded in stripes. - Column 3: A diagonal line from bottom left to top right with a half circle at bottom end. The half circle is shaded in black. - Column 2: A diagonal line from bottom left to top right with a half circle at bottom end. The half circle at bottom end. The half circle is not shaded - Column 3: A diagonal line from too left to bottom right with a half circle is shaded in strices. Row 3: - Column 1: A diagonal line from bottom left to too right with a half circle is shaded in strices. 1 have these triples correct. Let me represent in one more time. Fostion (1, 1): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (not shaded) Position (1, 2): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (black) Position (1, 2): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (bottom-left to top-right), Half-circle (bottom), Shading (striped) Position (1, 3): Diagonal (striped) Position (1, 3): Diagonal (striped) Position (2, 3): Diagonal (striped) Position (1, 3): Diagonal (striped) Position (2, 3): Diagon 2): Diagonal (bottom-left to top-right), Half-circle (bottom-,ight), Half-circle (bottom-,ight), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) Position (3, 2): Diagonal (top-left to bottom-right), Half-circle (top), Shading (striped) P bit hows and columns. For Position (3, 3) it should be a diagonal from bottom-left to too-right. For the ball-circle position (3, 3) it should be a diagonal from bottom-left to too-right. For the ball-circle position (3, 3) it should be a diagonal from bottom-left to too-right. -> striped -> black -> striped -> black So I'm choosing Option B. But Wait, let me clarify: the observation I made about the pattern of shading, when reading the grid row by row, is: Not shaded \rightarrow Striped \rightarrow Black $\rightarrow > 0$ Striped $\rightarrow > Black <math>\rightarrow > 0$ Striped $\rightarrow > Black <math>\rightarrow > 0$ Striped $\rightarrow > 0$ logically. If there's a pattern in the shading, it might be cycle of 3: Not shaded -> Striped + Black + Not shaded (1, 2) (should be Striped if cyclic) - Striped (1, 2) - Black (2, 1) (should be Staded if cyclic) - Not shaded - ... But Tra seeing: - Not shaded (1, 1) - Striped (1, 2) - Black (2, 1) (should be Striped if cyclic) - Striped if cyclic) - Striped (2, 3) (should be Striped if cyclic) - Striped (3, 3) (should be Striped if cyclic) - Striped (3, 3) (should be Striped if cyclic) - S Black if cyclic) Walt, I found It The pattern is more like a rotation. If you read the grid in anti-clockwise direction, starting from position (1, 1), you get: (1, 1): Not shaded (1, 2): Striped (2, 3): 2(3, 2): Black (3, 3): 7(3, 2): Black (3, 3): 2(3, 2): 2(3, 3) but to complete the spiral, it seems like it should be Not shaded, Striped, and a striped, back - Not shaded, striped, back - Not shaded - Striped, Back ? (Wait, I see attern in the shading, row-by-row Row 1 has a pattern Not shaded - Striped - Black. Row 2 has the same pattern, but rotated to start from Black. Back - Not shaded - Striped, Back ? (Wait, I see attern is shading, row-by-row Row 1 has a pattern Not shaded - Striped - Black. Row 2 has the same pattern, but rotated to start from Black. Back - Not shaded - Striped, Back ? (Wait, I see attern is shading, row-by-row Row 1 has a pattern Not shaded - Striped - Black. Row 2 has the same pattern in the diagonal direction for each row. Row 1 Striped, Row 3 (Striped, Back ?) Wait, I see attern is shading, row-by-row Row 1 has a pattern Not shaded - Striped - Black. Row 2 has the same pattern in the diagonal direction for each row. Row 1 Striped, Row 3 (Striped, Back ?) Wait, I see attern is shading, row-by-row Row 1 has a pattern Not shaded - Striped - Black. Row 2 has the same pattern in the diagonal direction for each row. Row 1 Striped, Row 3 (Striped, Row left to top-right. Row 2: Top-left to bottom-right → Bottom-left to top-right → Top-left to bottom-right → Top-left to bottom-right → Top-left to bottom-right → Top-left to bottom-right. By this reasoning, position (3, 3) should have a diagonal from bottom-left to top-right. For the half-circle position, there isn't a similar clear pattern across rows or columns. But at this point, given the 2 aspect reasoning i'm more inclined to think it's top than bottom. So, position (3, 3) should have: - A diagonal from bottom-left to top-right - A half-circle at the top so far, and 5 at the bottom. If we aim for balance, a half-circle at the top would be 4 at the top and 5 at the bottom.) - Not shaded Matching this with the options: Option B: A diagonal line from bottom left to top right with a half circle at the top end The half circle is not shaded. I think the correct answer is Option B. But I realized I haven't fully convinced myself about the half-circle position. Let me take it one step at a time: 1. The last square should have a 'lagonal from bottom-left to too-right. This is clear from the alternating pattern in both rows and columns. 2. The last square should have a 'Not shaded' half-circle. This is clear from the cyclic pattern of shading in each row. 3 The half-circle position is the tricklest one. Let me check if there is a pattern row by row: (1, 1), (1, 2), (1, 2, 3); [Foot, Bottom, Bottom; (2, 1), (3, 2); [Bottom, Bottom; (3, 1), (3, 2); [Bottom; (3, 1), (3, 2); [Bo column-wise approach: (1, 1), (2, 1), (3, 1); [7:0; Bottom Position (1, 2), (2, 2), (3, 2); [Bottom, Top, ?] Looking at the hird column, ta seems like (Thires's a progression, it would be [Bottom Position (1, 3), (2, 3), (3, 3); [Bottom, Top, ?] Looking at the hird column, ta seems like (Thires's a progression, it would be [Bottom Position (1, 3), (2, 3), (3, 3); [Bottom, Top, ?] Looking at the hird column, ta seems like (Thires's a progression, it would be [Bottom Position (1, 3), (2, 3), (3, 3); [Bottom, Top, ?] Looking at the hird column, ta seems like (Thires's a progression, it would be [Bottom Position (2, 2); [Bottom Position (1, 3), (2, 3), (3, 3); [Bottom, Top, ?] Looking at the hird column, ta seems like (Thires's a progression, it would be [Bottom Position (2, 3); [Bottom Position (1, 3); [Contro Position (2, 3); [Contro Position (1, 3); [Contro Position (2, 3); [Contro Po Striped (S), or Black (B), Row 1: IB-L to T-R, T. NI IT-L to B-R, B, Si IB-L to T-R, B, BI Row 2: IT-L to B-R, T. SI Row 3: IB-L to T-R, B, BI Row 2: IT-L to B-R, T. SI Row 3: IB-L to T-R, B, SI IT-L to B-R, T. SI Row 3: IB-L to T-R, B, SI IT-L to B-R, T. SI Row 3: IB-L to T-R, B, SI IT-L to B-R, T. BI Row 2: IT-L to B-R, T. BI Row 2: IT-L to B-R, T. SI Row 3: IB-L to T-R, B, SI IT-L to B-R, T. BI Row 2: IT-L to B-R, T. BI Row 2: IT-L to B-R, T. BI Row 3: IB-L to T-R, B, SI IT-L to B-R, T. SI Row 3: IB-L to T-R, B, SI IT-L to B-R, B, SI IT-L to B-R, B, SI IT-L to B-R, T. BI Row 3: IT-L to B-R, T. BI Row 3: IT-L to B-R, B, SI IT-L to B-R, B, SI IT-L to B-R, T. SI Row 3: IT-L to B-R, B, SI The location of the location o shading, and the distribution of half-circle positions for a balanced grid, I believe position (3, 3) should have: - A diagonal from bottom-left to top-right - A half-circle at top end. The half circle is not shaded. So, the correct answer is Option B. Reply. After analyzing the patterns in the 3x3 grid puzzle, need to determine what belongs in the empty third row, third column gostion. First, let me examine the patterns for each attribute: 1, "Diagonal line direction": Looking at both rows and columns, there's a clear alternating pattern between 'bottom left to bottom indit' and 'too left to bottom right' and 'too to top right. 2. "Shading pattern": Each row follows a cyclic pattern of 'not shaded -> striped -> black - Row 2: black -> not shaded -> striped -> black -> not shaded -> striped -> black -> (should be 'not shaded' to complete the pattern) 3. "Half circle position". For the half circle placement, the pattern is less obvious, but examining row 3 so far (bottom -> top), and considering that we currently have 3 half circles at top positions and 5 at bottom positions in the grid, a top position would create better balance. Combining these observations, the empty position should have: - A diagonal line from bottom left to top right - A half circle at the top end - The half circle at the top end - The half circle as bould not be shaded Looking at the answer options, this matches exactly with: B Therefore, Option B is the correct answer: A diagonal line from bottom left to top right - A half circle at the top end - The half circle as bottom positions and 5 at bottom positions in the grid, a top position should have: - A diagonal line from bottom left to top right - A half circle as bould not be shaded Looking at the answer options, this matches exactly with: B Therefore, Option B is the correct answer: A diagonal line from bottom left to top right - A half circle as the top end - The half circle as the top end left to top right with a half circle at top end. The half circle is not shaded





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