Grid Leaf Drawing: Outline and Vein Construction

Original task 1 / independent drawing and calculation

Task 1

On a 6 by 10 cell frame with a vertical midrib, treat the frame as 6 cells wide and 10 cell intervals tall, giving 11 horizontal grid lines. Plot a narrow leaf using half-widths in cells from base to tip: 0.5, 1, 1.5, 2, 2, 1.5, 1, 0.5, 0.5, 0. Place three side veins at intervals 3, 5, and 7, alternating left and right. End rows 3 and 5 exactly one cell short; at interval 7, where the half-width is 1 cell, use the stated short-row exception and either end at the outline or at the permitted 0.5-cell reference. Describe the steps and give the vein counts.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 2 / independent drawing and calculation

Task 2

Use a 10 by 10 cell frame with a vertical midrib, treating the frame as 10 cells wide and 10 cell intervals tall, giving 11 horizontal grid lines. Plot a rounded leaf with half-widths in cells from base to tip: 1, 2, 3, 4, 5, 5, 4, 3, 2, 0. Place four side veins at intervals 3, 5, 7, and 9, alternating left and right, each ending one cell short of the outline. What are the vein cell counts, and how do you check the outline is closed?

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Grid Leaf Drawing: Outline and Vein Construction

Original task 3 / independent drawing and calculation

Task 3

On an 8 by 12 cell frame, treat the frame as 8 cells wide and 12 cell intervals tall. Use an angled midrib starting at the bottom-center intersection: move up one cell and right one cell for each of the first two intervals, then up one cell and left one cell for the next two intervals, then straight up one cell for each of the last eight intervals to reach the top frame line. At every interval, plot an outline point 2 cells to each side of the midrib. Place side veins at intervals 3 and 6, each ending one cell short of the outline. Describe the midrib path and vein cell counts.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Grid Leaf Drawing: Outline and Vein Construction

Original task 4 / independent drawing and calculation

Task 4

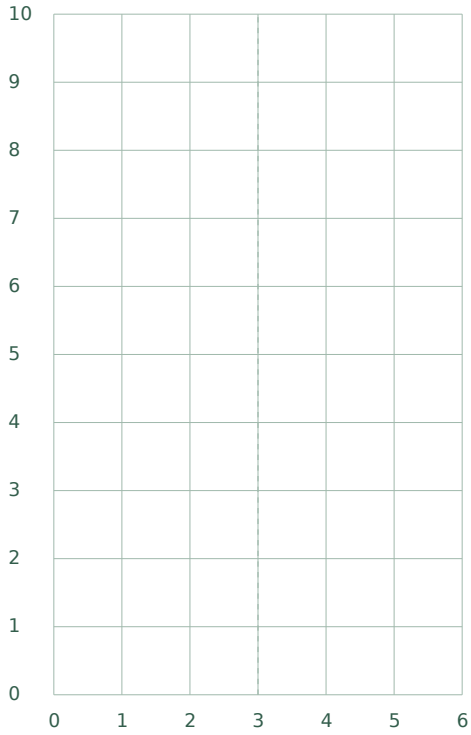
Design your own leaf on a 9 by 9 cell frame with a vertical midrib, treating the frame as 9 cells wide and 9 cell intervals tall. Choose half-widths in cells from base to tip that increase, then decrease, using at least six intervals. Place at least three side veins, alternating sides, each ending one cell short of the outline. State your half-width sequence, the vein cell counts, and one check you will use to confirm grid consistency.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Full drawing sheet / reusable blank workspace

Reusable full drawing sheet for Tasks 1 to 4. Print another copy when needed. Keep all original task measurements; if a task specifies larger paper, use that paper size.

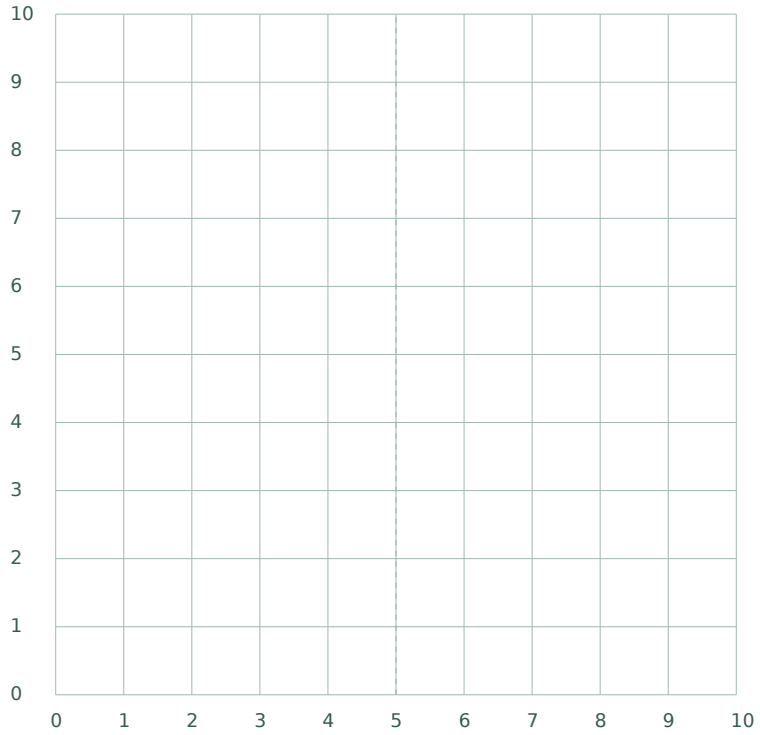
6 by 10 cells / 9 mm printed practice cells



Task 1 narrow-row exception: at interval 7 choose the permitted outline or 0.5-cell endpoint. State your choice. This exception is not called one cell short. Other selected veins use half-width minus one.

Your width/vein record: _____

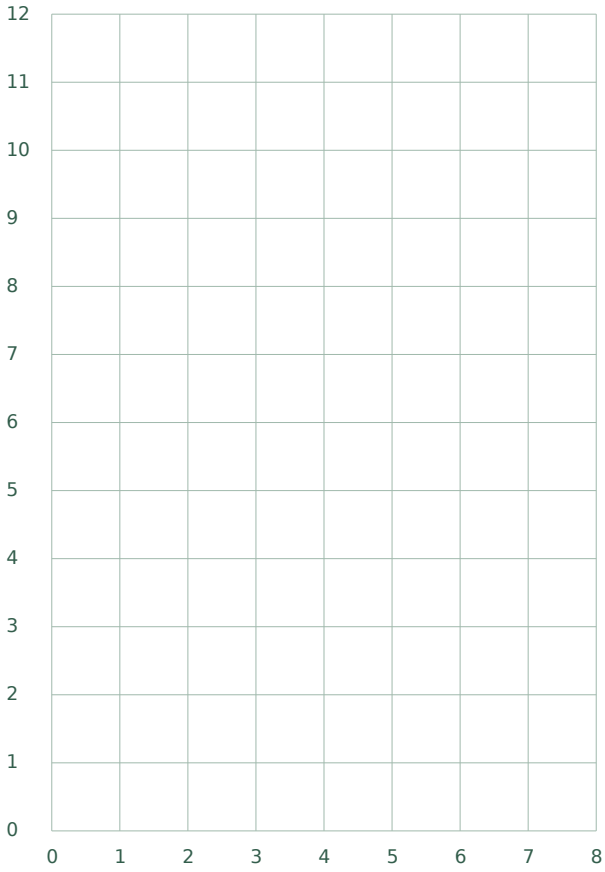
10 by 10 cells / 9 mm printed practice cells



Widths refer to intervals above the base, not an extra base row. Both outlines start at the common base; the final zero gives one common tip.

Your width/vein record: _____

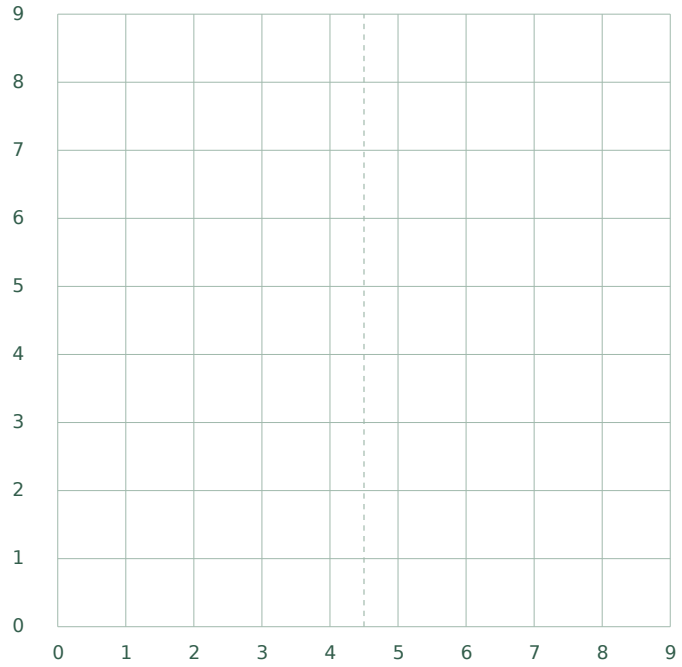
8 by 12 cells / 9 mm printed practice cells



Given constant half-width 2 at every interval: the top remains four cells wide, not a zero-width tip. The diagram joins its top endpoints to close this particular fixed-width outline.

Your width/vein record: _____

9 by 9 cells / 9 mm printed practice cells



Widths refer to intervals above the base, not an extra base row. Both outlines start at the common base; the final zero gives one common tip. The Task 4 key is one valid design, not a required unique answer.

Your width/vein record: _____