Draw a Winged Cross: Symmetry and Feather Placement

Original tasks 1, 2 / independent work

Task 1

A cross has a vertical bar 2 units wide and a horizontal bar 2 units wide on a 12 by 16 grid. The vertical bar starts 2 units below the top margin. The horizontal bar crosses at the horizontal center line, 6 units down from the top of the vertical bar. How many units from the top margin is the horizontal bar?

Task 2

Each wing extends 5 units from the cross. The left wing tip is measured 5.2 cm from the center line. The right wing tip is measured 4.9 cm from the center line. Using a hypothetical tolerance of 0.5 cm, do the wing tips pass the symmetry check?

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Original tasks 3, 4 / independent work

Task 3

A wing uses 4 inner feathers, 5 middle feathers, and 3 outer feathers. The other wing uses 4 inner, 4 middle, and 3 outer feathers. What is the total feather count difference between the wings?

Task 4

On a 12 by 16 grid, a wing root is 1 unit from the center line and the wing tip is 5 units from the center line. The wing rises 4 units above the horizontal bar. If you move the wing tip 1 unit farther out, what is the new distance from the center line, and does the wing span increase or decrease?