Draw a Turtle Shell: Dome Geometry and Scute Pattern

Original tasks 1, 2 / independent work

Task 1

A shell is 8 cm wide and 5 cm tall. The rim band is 1.5 cm wide. What is the width of the inner pattern area?

Task 2

On a 12 cm wide shell, you plan five central scutes of equal width. What is each scute width if they fill the center line exactly?

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Original tasks 3, 4 / independent work

Task 3

A side-view dome has center height 7 cm and side heights 4 cm and 4 cm. Is the contour symmetric left to right? Explain.

Task 4

You draw a rim band 3 cm wide on a 10 cm shell. Is this within the suggested narrow-band convention of about one-fifth shell width?