Bear Skull from Above: Crest and Molar Row Drawing Guide

Original tasks 1, 2, 3 / complete keys

Task 1

A skull rectangle is 14 cm wide and 18 cm tall. Divide the height into three equal bands. State each band height and the total of the three bands.

Answer: Each band is 6 cm tall, and the three bands total 18 cm.

Reason: 18 divided by 3 equals 6. Adding 6 plus 6 plus 6 gives 18, matching the rectangle height.

Check: Measure each band with a ruler and add the three measured heights; the sum should equal 18 cm.

Task 2

Molar centers are placed at 1.5 cm, 3 cm, and 4.5 cm from the midline. What is the row length, and what is the interval between adjacent molars?

Answer: The row length is 3 cm, and each interval is 1.5 cm.

Reason: Subtract the first center from the last: 4.5 minus 1.5 equals 3 cm. Adjacent differences are 3 minus 1.5 equals 1.5 and 4.5 minus 3 equals 1.5.

Check: Measure the distance from the first to the last mark and confirm it is 3 cm; measure each gap and confirm 1.5 cm.

Task 3

A crest is drawn 0.8 cm wide at the rear and 0.4 cm wide at the front. What is the width change, and what is the average of the two widths?

Answer: The width change is 0.4 cm, and the average width is 0.6 cm.

Reason: 0.8 minus 0.4 equals 0.4 cm. The average is 0.8 plus 0.4, divided by 2, which equals 0.6 cm.

Check: Measure both widths, subtract the smaller from the larger, and average the two measurements.

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Original tasks 4 / complete keys

Task 4

A drawing uses a 1 cm to 1 cm scale. The drawn molar row is 2.5 cm long. If the scale were changed to 1 cm on the drawing equals 2 cm on the paper, what would the same row represent?

Answer: The row would represent 5 cm.

Reason: Multiply the drawn length by the scale factor: 2.5 times 2 equals 5 cm.

Check: Re-measure the drawn row as 2.5 cm and multiply by the stated factor of 2; confirm the result is 5 cm.

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Source rubric / reflection

- [ ] Rectangle is 16 cm by 20 cm and divided into four equal 5 cm bands.
- [ ] Sagittal crest is centered on the midline and tapers from 1 cm to 0.5 cm.
- [ ] Three molar marks per side are spaced at 1.5 cm intervals starting 2 cm from the midline.
- [ ] Snout is 6 cm wide and braincase is 16 cm wide.
- [ ] Labels use baseline-to-midline x-height and point to the correct features.
- [ ] Scale note is present and arithmetic is consistent with the stated units.

Reflection: What did you check, what did you change, and what will you try next?