Draw Angel Falls: Cliff, Waterfall, and Plunge Pool Construction

Original tasks 1, 2, 3, 4 / complete keys

Task 1

A frame is 20 cm wide. The waterfall channel is 5 cm wide. What is the channel width as a fraction of the frame width?

Answer: 5/20 = 1/4 of the frame width.

Reason: Divide the channel width by the frame width and simplify.

Check: Multiply 20 cm by 1/4 to get 5 cm.

Task 2

A pool is 12 cm wide and a waterfall channel is 4 cm wide. How many times wider is the pool than the channel?

Answer: 3 times wider.

Reason: Divide pool width by channel width: 12 ÷ 4 = 3.

Check: Multiply 4 cm by 3 to get 12 cm.

Task 3

A cliff base is 3 cm above the pool top. The pool is 7 cm tall. If the pool top is at 15 cm from the bottom of the frame, where is the cliff base measured from the bottom?

Answer: 18 cm from the bottom.

Reason: Add the gap to the pool top position: 15 + 3 = 18 cm.

Check: Subtract 3 cm from 18 cm to return to 15 cm.

Task 4

A waterfall drop is 16 cm long. You draw it in two equal segments. How long is each segment?

Answer: 8 cm each.

Reason: Divide the total drop by 2: 16 ÷ 2 = 8 cm.

Check: Add the two segments: 8 + 8 = 16 cm.

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Source rubric / reflection

- [ ] Cliff is built from at least three stacked planes.
- [ ] Waterfall has two clear drop lines from cliff lip to pool surface.
- [ ] Plunge pool is wider than the waterfall channel.
- [ ] Shading follows the pool shape and marks the impact zone.
- [ ] Convention is used consistently: solid edges, dashed spray, short pool ticks.
- [ ] Hypothetical measurements are labelled and units are consistent.

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