Drawing Ideas List: Thumbnail Practice for Concrete Objects

Original tasks 1, 2, 3 / complete keys

Task 1

A student plans ten thumbnail boxes and completes seven. Calculate the completion rate as a decimal and as a percentage.

Answer: 7 divided by 10 = 0.7, or 70 percent.

Reason: The completion rate is completed thumbnails divided by planned thumbnails. Seven divided by ten equals 0.7. Multiply by 100 to express it as 70 percent.

Check: Recount the planned boxes and completed boxes on the sheet. Confirm that 7 divided by 10 equals 0.7 using a calculator or long division.

Task 2

A student measures a thumbnail box as 5 cm wide and 4 cm tall. Calculate the area of one box in square centimeters. Then calculate the total area of six such boxes.

Answer: One box: 5 cm times 4 cm = 20 square cm. Six boxes: 20 square cm times 6 = 120 square cm.

Reason: Area of a rectangle is width times height. Five times four equals twenty. Multiply by six boxes to get the total area.

Check: Measure the box again with a ruler and confirm the width and height. Recalculate 5 times 4 and then multiply by 6.

Task 3

A student runs three timed rounds of four minutes each. In round one, two thumbnails are completed. In round two, three are completed. In round three, one is completed. Calculate the total time used and the total completed thumbnails. Then calculate completed thumbnails per minute.

Answer: Total time: 4 + 4 + 4 = 12 minutes. Total completed: 2 + 3 + 1 = 6 thumbnails. Completed per minute: 6 divided by 12 = 0.5 thumbnails per minute.

Reason: Add the round durations and the completed counts separately. Then divide total completed by total time to get the rate.

Check: Confirm the timer durations and recount the completed thumbnails. Recalculate 6 divided by 12 equals 0.5.

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Original tasks 4 / complete keys

Task 4

A student writes four original prompts in the blank slot section and completes three of them in a timed round. The planned number of original-prompt thumbnails is four. Calculate the completion rate for original prompts as a decimal. Then state how many original prompts remain incomplete.

Answer: Completion rate: 3 divided by 4 = 0.75. Incomplete original prompts: 4 minus 3 = 1.

Reason: Divide completed original-prompt thumbnails by planned original-prompt thumbnails. Subtract completed from planned to find the incomplete count.

Check: Recount the original prompts written in the blank slot section and the completed thumbnails for those prompts. Confirm 3 divided by 4 equals 0.75 and 4 minus 3 equals 1.

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Source rubric / reflection

- [ ] The sheet includes three category headings with concrete prompts under each.
- [ ] The thumbnail boxes are measured and labeled with their actual dimensions.
- [ ] A consistent thumbnail convention is written at the top and followed in the sketches.
- [ ] At least four original prompts are added to the blank prompt-slot section.
- [ ] Completion rate is calculated correctly from planned and completed thumbnails.
- [ ] Labels use a consistent lettering style; x-height is baseline to midline and letter styles may vary.
- [ ] The review includes one sentence about the clearest silhouette and one about category difficulty.

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