Draw a Bug: Segmented Body and Leg Construction

Original tasks 1, 2, 3 / complete keys

Task 1

Draw a bug using hypothetical units: head 1, thorax 2, abdomen 3. Place six legs on the thorax at three positions. Label H, T, and A, and number the legs 1 to 6.

Answer: A drawing with three adjacent zones of 1, 2, and 3 units, six legs attached only at the thorax, three attachment positions with two legs each, and labels H, T, A plus leg numbers 1 to 6.

Reason: The unit values set the zone lengths, and the three thorax positions times two sides give six legs. Labels and numbers make the construction checkable.

Check: Count the zones (3), count the legs (6), confirm every leg starts on the thorax, and confirm six leg numbers are present.

Task 2

A drawing shows four legs on the thorax and two legs on the abdomen. State the minimum change needed to meet the six-leg thorax rule.

Answer: Move the two abdomen legs to the thorax so all six legs attach there, keeping three positions with two legs each.

Reason: The rule requires six legs and all attachments on the thorax. Moving the two misplaced legs satisfies both conditions without changing the total count.

Check: Count legs on the thorax after the change: should be six. Count legs elsewhere: should be zero.

Task 3

Using hypothetical units, a bug has head 2, thorax 3, abdomen 4. How many units long is the body axis from the front of the head to the rear of the abdomen?

Answer: 9 units.

Reason: Add the three zone lengths: 2 plus 3 plus 4 equals 9. The zones are adjacent, so the total axis length is the sum.

Check: Re-add the three values and confirm the sum equals the marked axis length on the drawing.

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Original tasks 4 / complete keys

Task 4

A student draws six legs but only four joint dots. Describe the correction and the check that confirms it.

Answer: Add one joint dot to each of the two legs missing a dot so every leg has one joint dot. Then count joint dots: should be six.

Reason: The convention requires one visible joint per leg. Six legs therefore need six joint dots. Adding the two missing dots makes the count match.

Check: Count legs (6), count joint dots (6), and confirm each leg has exactly one dot between its upper and lower segments.

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Source rubric / reflection

- [ ] Three body zones are present and adjacent: head, thorax, abdomen.
- [ ] Exactly six legs are drawn.
- [ ] All six legs attach to the thorax.
- [ ] Each leg shows one visible joint dot between upper and lower segments.
- [ ] Segment labels H, T, and A are present and readable.
- [ ] Leg attachment points are numbered 1 through 6.
- [ ] Valid stylistic alternatives are accepted if the three-zone order, six-leg count, and thorax attachment remain clear.

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