Easy Drawing of Pins: Safety Pin Clasp and Sewing Pin Head

Original tasks 1, 2, 3 / complete keys

Task 1

Draw a safety pin with an x-height of 8 mm. Use a total length of 6 x-heights, a coil 1 x-height wide, and a clasp 1.5 x-heights long. State the length, coil width, and clasp length in millimeters.

Answer: Length is 48 mm, coil width is 8 mm, clasp length is 12 mm.

Reason: Multiply the x-height by the proportion: 6 × 8 = 48 mm; 1 × 8 = 8 mm; 1.5 × 8 = 12 mm.

Check: Measure your drawing with a ruler. The total length should be close to 48 mm, the coil close to 8 mm, and the clasp close to 12 mm.

Task 2

Draw a sewing pin with an x-height of 12 mm. The shaft is 5 x-heights long and the head is 1 x-height wide. State the shaft length and head width in millimeters.

Answer: Shaft length is 60 mm and head width is 12 mm.

Reason: 5 × 12 = 60 mm for the shaft; 1 × 12 = 12 mm for the head.

Check: Measure the shaft and head. The shaft should be close to 60 mm and the head close to 12 mm wide.

Task 3

A safety pin drawing has a coil 9 mm wide and a clasp 13.5 mm long. If the coil is 1 x-height wide, what is the x-height, and what should the total length be if it is 6 x-heights?

Answer: The x-height is 9 mm, and the total length should be 54 mm.

Reason: Coil width equals 1 x-height, so x-height = 9 mm. Total length = 6 × 9 = 54 mm. The clasp is 1.5 × 9 = 13.5 mm, which matches the given clasp length.

Check: Confirm that 13.5 ÷ 9 = 1.5, then measure the total length against 54 mm.

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Original tasks 4 / complete keys

Task 4

Draw both pins using the same x-height of 10 mm. The safety pin is 6 x-heights long with a 1 x-height coil and a 1.5 x-height clasp. The sewing pin shaft is 5 x-heights long with a 1 x-height head. List the four key measurements in millimeters and check that the clasp captures the point.

Answer: Safety pin length 60 mm, coil 10 mm, clasp 15 mm; sewing pin shaft 50 mm, head 10 mm. The clasp should be a cup that the point enters.

Reason: Multiply each proportion by 10 mm: 6 × 10 = 60; 1 × 10 = 10; 1.5 × 10 = 15; 5 × 10 = 50.

Check: Measure each part with a ruler and visually confirm the top arm ends inside the clasp cup.

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Source rubric / reflection

- [ ] Safety pin length is close to 6 x-heights (within about 1 x-height).
- [ ] Coil is a closed loop about 1 x-height wide.
- [ ] Clasp is a cup shape about 1.5 x-heights long that opens toward the coil.
- [ ] Top arm ends inside the clasp cup, and the point is visible.
- [ ] Sewing pin shaft is close to 5 x-heights long and straight.
- [ ] Sewing pin head is centered and about 1 x-height wide; round, flat, or oval heads are all acceptable.
- [ ] Point tapers over about 0.5 x-height.
- [ ] Guide lines are erased and the final outline is clear.

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