Simple Nativity Drawing: Stable, Figures, and Star

Original tasks 1, 2, 3 / complete keys

Task 1

A hypothetical page is 160 mm wide with a 10 mm margin on each side. You want a stable base 60 mm wide centered. How far is the left end of the base from the left margin?

Answer: 40 mm.

Reason: The usable width is 160 minus 20 equals 140 mm. Centering a 60 mm base leaves 80 mm total side space, so 40 mm on each side. The left end is 40 mm from the left margin.

Check: Add 40 mm left space, 60 mm base, and 40 mm right space to get 140 mm usable width; add the 20 mm margins to get 160 mm.

Task 2

A stable opening is 40 mm wide. You place two adult figures 10 mm apart, each 10 mm wide, and one small figure 8 mm wide between them. Does the group fit within the opening?

Answer: Yes, with 2 mm to spare.

Reason: Total width is 10 plus 10 plus 8 plus 10 equals 38 mm. The opening is 40 mm, so the group fits with 2 mm remaining.

Check: Add the widths and gaps: 10 + 10 + 8 + 10 = 38 mm, which is less than 40 mm.

Task 3

A roof peak is 30 mm above the stable base. You want the star center 10 mm above the peak. If the star is 20 mm tall, what is the distance from the star top to the stable base?

Answer: 50 mm.

Reason: The star center is 30 plus 10 equals 40 mm above the base. Half the star height is 10 mm, so the top is 40 plus 10 equals 50 mm above the base.

Check: Work downward: star top 50 mm, star center 40 mm, roof peak 30 mm, stable base 0 mm.

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Original tasks 4 / complete keys

Task 4

On a hypothetical page, the stable base is 55 mm wide and centered. The left margin is 12 mm and the right margin is 12 mm. If the page is 150 mm wide, how much space is on each side of the stable base?

Answer: 35.5 mm on each side.

Reason: Usable width is 150 minus 24 equals 126 mm. Subtract the 55 mm base to get 71 mm total side space. Half of 71 is 35.5 mm on each side.

Check: Add 12 + 35.5 + 55 + 35.5 + 12 = 150 mm. The arithmetic confirms 35.5 mm on each side.

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Source rubric / reflection

- [ ] Stable is drawn as a rectangle with a triangular roof and a clear opening.
- [ ] Stable base is level and centered left to right within the page margin.
- [ ] Three figures are placed inside or at the stable opening with bases on a common ground line.
- [ ] Figure heads do not overlap and each figure is recognizable as an upright form.
- [ ] Star is centered above the roof peak with a visible gap.
- [ ] Composition is balanced with empty space on both sides of the stable.
- [ ] Valid alternative styles are accepted if placement and recognizability checks pass.

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