Rainbow Scale Drawing: Overlapping Rows with a Hue Gradient

Topic reference / ordinary illustration



Ordinary topic reference. Hypothetical dimensions in the four tasks are supplied in their own text; this illustration is not their measured answer.

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Worked example / complete source key

Plan a five-row pattern with hue from 30 degrees to 270 degrees, w = 18 mm, h = 12 mm, and d = 8 mm. State the hue step and the cumulative distance to row 5.

Answer: Hue step = (270 minus 30) divided by (5 minus 1) = 240 divided by 4 = 60 degrees. Row hues are 30, 90, 150, 210, and 270 degrees. Cumulative distance to row 5 = (5 minus 1) times 8 = 32 mm. Overlap per row = h minus d = 12 minus 8 = 4 mm.

Reason: The hue step divides the total range by the number of gaps between rows. The cumulative distance uses the row index minus one because row 1 is the reference. The overlap check confirms d is less than h.

Check: Measure the distance from row 1 to row 5 on the plate; it should be 32 mm. Confirm five labeled hue numbers increase by 60 degrees each.