Draw a Christmas Wreath: Loops, Bow and Berry Clusters

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

A wreath has an outer diameter of 16 cm and an inner diameter of 8 cm. What is the width of the foliage band, and how many 2 cm berry clusters fit along the bottom quarter of the outer circle if each cluster needs 2 cm of space? Use pi as 3.14.

Answer: Band width is 4 cm. The outer circumference is about 50.24 cm; one quarter is about 12.56 cm, so 6 clusters of 2 cm fit with 0.56 cm left over.

Reason: Band width is half the difference of diameters: (16 - 8) / 2 = 4 cm. Outer circumference is 16 x 3.14 = 50.24 cm. A quarter is 50.24 / 4 = 12.56 cm. Dividing by 2 cm per cluster gives 6 full clusters and a remainder of 0.56 cm.

Check: Recheck by multiplying 6 clusters by 2 cm to get 12 cm, then adding 0.56 cm to reach 12.56 cm. Confirm the band width by measuring from inner to outer circle at two opposite points.