# Draw Wheel Rims: Spoke Patterns and Tire Profile Comparison

Original task 1 / independent drawing and calculation

## Task 1

Draw a five-spoke rim plate with an outer tire radius of 55 mm, a rim edge radius of 40 mm, and five lugs. State the sidewall band width and the angular step for spokes and lugs.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

# Draw Wheel Rims: Spoke Patterns and Tire Profile Comparison

Original task 2 / independent drawing and calculation

## Task 2

A mesh plate uses two crossing line sets between the hub circle and rim edge circle. The outer tire radius is 60 mm and the rim edge radius is 45 mm. Where must the crossings stay, and what is the band width?

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

# Draw Wheel Rims: Spoke Patterns and Tire Profile Comparison

Original task 3 / independent drawing and calculation

## Task 3

Compare a 12-spoke plate and a five-spoke plate that share an outer tire radius of 50 mm and a rim edge radius of 38 mm. Give the angular steps, the band width, and one visual difference.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

# Draw Wheel Rims: Spoke Patterns and Tire Profile Comparison

Original task 4 / independent drawing and calculation

## Task 4

You choose a hypothetical outer tire radius of 48 mm and want a sidewall band of 10 mm. What rim edge radius do you need, and if you draw 8 spokes, what is the angular step?

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

## Full drawing sheet / reusable blank workspace

Reusable full drawing sheet for Tasks 1 to 4. Print another copy when needed. Keep all original task measurements; if a task specifies larger paper, use that paper size.