Draw a Cotton Gin: Labeled Mechanical Drawing Guide

Original task 1 / independent drawing and calculation

Task 1

On a 15 cm by 10 cm area, draw a frame 6 cm wide and 4 cm tall. Add a hopper 3 cm wide above it and a saw cylinder 1.5 cm across inside. Label frame, hopper, and saw cylinder. Record the hopper-to-frame width ratio.

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.

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Original task 2 / independent drawing and calculation

Task 2

Draw a gin stand 5 cm wide and 4 cm tall. Place a brush cylinder 2 cm across behind it using a dashed circle. Add a seed chute 1 cm wide below the stand. Label stand, brush cylinder, and seed chute. Record the brush-to-stand width ratio.

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.

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Original task 3 / independent drawing and calculation

Task 3

Draw an air duct as a curved band 1 cm wide leading from the top of a 4 cm wide stand to the right edge of a 12 cm wide drawing area. Add a drive pulley 1 cm across at the lower left and a belt as a straight line to the stand. Label air duct, drive pulley, and belt. Record the duct width to stand width ratio.

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.

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Original task 4 / independent drawing and calculation

Task 4

Draw a complete cotton gin in a 20 cm by 15 cm area with a 1 cm border. Include frame, hopper, stand, saw cylinder, brush cylinder, mote board, seed chute, air duct, drive pulley, and belt. Label all ten parts. Record two ratios: hopper-to-frame width and brush-to-saw diameter.

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.