

NAILS: WITH NUMBERS

A VIDEO DEMONSTRATION CALCULATION PUZZLE

Physics Cinema Classics: Nails into Wood

Name: _____ Per: _____ Date: _____

OBSERVATION

Observe the video demonstration of the nails being driven into the wood by cylinders of differing masses suspended at equal heights above the nails. Record relevant information as it appears during the demonstration.

PUZZLE

How much force do the cylinders exert on their respective nails? When you are able to determine the solution, proceed to the “solution” area below. At certain time intervals, your instructor will offer clues. You may not need any further clues to solve the puzzle.

CLUE 1

CLUE 2

CLUE 3

SOLUTION

Describe the logic of your solution. Show all appropriate calculations. Box your final answer.

EXTENSION

Use the force value you found in the solution to determine the depth to which each nail had been driven.