

MATHEMATICAL CURVE CONJECTURES

Write-Pair-Share

Part 1

Please observe the suspended rope displayed by your instructor and make a conjecture concerning the nature of the curve, i.e., what type of mathematical curve do you think the suspended rope represents?

Part 2

After making your conjecture concerning the type of curve represented by the suspended rope, please discuss your conjecture with your nearest neighbor and explain to each other your underlying reasoning. You don't necessarily have to agree with each other's assessment, but do have a candid discussion; you are free to change your initial conjecture in light of your neighbor's explanation.

Afterwards, **please record your conjecture and reasoning in written form**; a single paragraph will be sufficient.

Part 3

Please answer the following questions:

1. Using the suspended rope and the rectangular grid as a source of data, determine a mathematical description of the curve based on your conjecture in function notation, i.e., describe $f(x)$ in terms of the independent variable x .

2. Please explain clearly how you would verify this description to ensure that it accurately represents the suspended rope.

3. Perform whatever mathematical calculations are necessary to verify your conjecture.