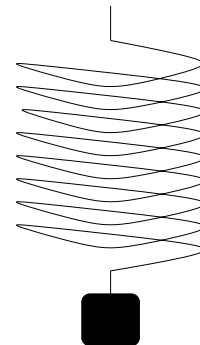


Quiz #5

SHOW YOUR WORK

1. (6 points) Clovis attaches a weight to a spring, as shown, and gives it a tug. He models the height of the weight above his desk with the formula $y = 5 + 2 \sin \left[6\pi \left(t + \frac{1}{4} \right) \right]$, where y is in inches and t is in seconds. What is the velocity of the weight at $t = \frac{1}{18}$ seconds? Give an exact answer.

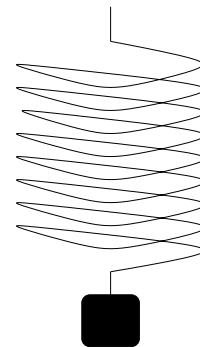


2. (4 points) Give the equation of the tangent line to the graph of $y = \sqrt[3]{2 + x^2}$ at the point with coordinates $(5, 3)$.

Quiz #5

SHOW YOUR WORK

1. (6 points) Clovis attaches a weight to a spring, as shown, and gives it a tug. He models the height of the weight above his desk with the formula $y = 5 + 3 \sin \left[6\pi \left(t + \frac{1}{4} \right) \right]$, where y is in inches and t is in seconds. What is the velocity of the weight at $t = \frac{1}{18}$ seconds? Give an exact answer.



2. (4 points) Give the equation of the tangent line to the graph of $y = 2\sqrt[3]{x^2 - 1}$ at the point with coordinates $(3, 4)$.