SECONDARY MATH 3 -- TERM 3 Sinusoidal Project

| Name(s) | Point(s) |
| :---: | :---: |
| 1. Draw a picture of your situation on your paper. Put Title on the Top. | $110$ |
| 2. List Amplitude, Period, Vertical/Horizontal Shift(s), if you start at bottom, top or middle. Time for 1 cycle, and then cycles in 6 minutes. | $110$ |
| 3. SHOW WORK TO SHOW HOW YOU GOT HOW MANY CYCLES IN 6 min . | 120 |
| 4. Do a large graph on your paper. Make sure you put numbers on both your x and y axis, and label what your $\mathrm{x} \& \mathrm{y}$ axis stand for. | $120$ |
| 5. Write the equation for your situation. | $120$ |
| 6. Using backwards PEMDAS from video show work to solve ALGEBRAICALLY to get the first time at the height of 10inches/feet. (Talk to me if your graph does not get to a height of 10.) SHOW ALL WORK. |  |
| 5. Graph on the calculator. Change the window to an appropriate window so you can see 5-12 cycles. Have me initial off that I saw it and that it matches your graph on your paper. | $110$ |
| 6. Use the equation to find the height at 4 seconds. Show that it matches on your graph. Label this point A on your graph. | $110$ |
| 7. Use your graphing calculator to find the first 4 times your graph is 2 inches/feet above the ground. List them below. Draw the line $y=2$ and show that the 4 times match your graph. $\qquad$ seconds, $\qquad$ seconds, $\qquad$ seconds, $\qquad$ seconds | $110$ |
| TOTAL SCORE | 1130 |

