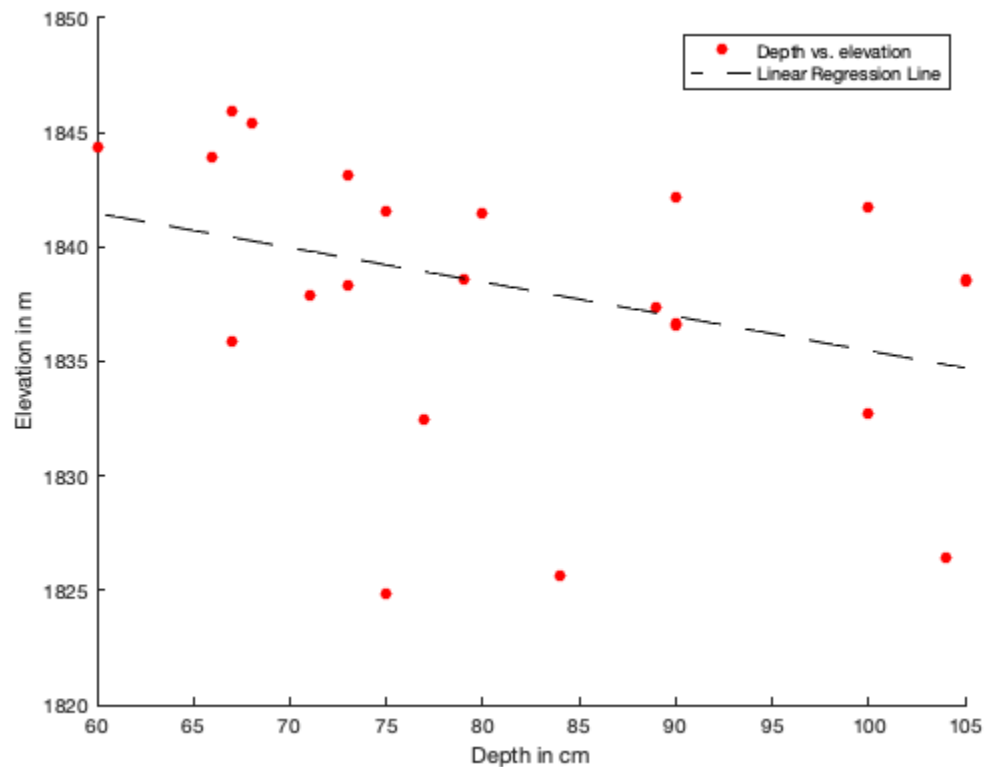# Lower Deer Point: Depths vs. Elevation

```matlab
Deer_data = [68, 60, 80, 105, 105, 67, 100, 77, 84, 104, 75, 90, 90,
 89, 73, 71, 79, 100, 90, 90, 75, 75, 73, 66, 67];
Deer_elevation = [1845.448, 1844.352, 1841.49, 1838.515, 1838.582,
 1835.881, 1832.686, 1832.423, 1825.601, 1826.436, 1824.898, 1836.6,
 1836.629, 1837.36, 1838.302, 1837.862, 1838.593, 1841.763, 1842.162,
 1842.162, 1841.541, 1841.578, 1843.098, 1843.898, 1845.926];

scatter(Deer_data, Deer_elevation,'o','Filled', 'r');
xlabel('Depth in cm');
ylabel('Elevation in m');


% Calculate the linear regression line and plot it
p = polyfit(Deer_data, Deer_elevation, 1);
x = linspace(min(Deer_data), max(Deer_data), 100);
y = polyval(p, x);
hold on;
plot(x, y, 'k--', 'LineWidth', 1);

% Add a legend to the plot
legend('Depth vs. elevation', 'Linear Regression Line');
```



```matlab
mode_deer = mode(Deer_elevation);
```

```matlab
str = 'The mode of Lower Deer Point elevation data is: ';
disp([str, num2str(mode_deer)]);


range_deer = range(Deer_elevation);
str = 'The range of Lower Deer Point elevation data is: ';
disp([str, num2str(range_deer)]);


median_deer = median(Deer_elevation);
str = 'The median of Lower Deer Point elevation data is: ';
disp([str, num2str(median_deer)]);

mean_deer = mean(Deer_elevation);
str = 'The mean of Lower Deer Point elevation data is: ';
disp([str, num2str(mean_deer)]);
```

The mode of Lower Deer Point elevation data is: 1842.162
The range of Lower Deer Point elevation data is: 21.028
The median of Lower Deer Point elevation data is: 1838.582
The mean of Lower Deer Point elevation data is: 1838.1514

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