

ME 1020 Engineering Programming with MATLAB

Problem 7.5:

5. For the data given in Problem 2:
 - a. Plot the scaled frequency histogram.

Go to the following webpage to download the data for this problem:

www.cs.wright.edu/~stthomas/prob7_2.xlsx

```
% Problem 7.5
clear
clc
disp('Problem 7.5: Scott Thomas')

force = xlsread('prob7_2');
x = 100:100:900;
[z,x] = hist(force,x);
binwidth = 100;

% Compute scaled frequency data:
area = binwidth*sum(z);
force_scaled = z/area;

% Plot the scaled histogram:
bar(x,force_scaled)
xlabel('Force (pounds)'), ylabel('Scaled Frequency')
title('Problem 7.5: Scott Thomas')

mean_force = mean(force)
stdev_force = std(force)
force68percent = mean_force - stdev_force
force96percent = mean_force + 2*stdev_force
```

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mean_force =

414.3000e+000

stdev_force =

198.4462e+000

force68percent =

215.8538e+000

force96percent =

811.1925e+000

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