
```

% relative height for each pole from rabbit robot
y_p = [1.4900, 0.7900, 0.7900, 0.3900, 0.3900, 0.3900, 0.7900, 0.7900, 0.3900,
0.3900, 0.3900];
% relative distance for each pole from rabbit robot
x_p = [4.95, 3.76, 3.76, 1.55, 3.73, 3.73, 6.38, 6.38, 8.15, 8.39, 8.39];
% radius of rollers
r = 0.0375;
% difference between angle required in radians
theta = 0.261799;
% angle of projection in degrees
angle = 45;
% gravitational acceleration
g = 9.8;
w1 = [];
w2 = [];
for i = 1:11;
    y_p(i) = y_p(i);
    x = x_p(i);
    y = y_p(i);
    v = sqrt((g*(x^2))/(2*(cosd(angle)^2)*((x(tand(angle))-y)))));
    W1 = (v/r) + ((v*cosd(angle)*(theta))/x);
    W2 = (v/r) - ((v*cosd(angle)*(theta))/x);
    w1(end+1) = W1*9.55;
    w2(end+1) = W2*9.55;
end
T = table(x_p',y_p',w1',w2','VariableNames',{'X','Y','W_1','W_2'}, ...
'RowNames',{'type 3 pole','type 2 right pole','type 2 left pole', ...
'type 1 center pole','type 1 right pole','type 1 left pole', ...
'opponent type 2 right pole','opponent type 2 left pole', ...
'opponent type 1 center pole','opponent type 1 right pole', ...
'opponent type 1 left pole'})

```

T =

11×4 table

	<i>X</i>	<i>Y</i>	<i>W_1</i>	<i>W_2</i>
<i>type 3 pole</i>	4.95	1.49	2124.5	2118.6
<i>type 2 right pole</i>	3.76	0.79	1742.6	1736.2
<i>type 2 left pole</i>	3.76	0.79	1742.6	1736.2
<i>type 1 center pole</i>	1.55	0.39	1152.5	1142.2
<i>type 1 right pole</i>	3.73	0.39	1630.2	1624.1
<i>type 1 left pole</i>	3.73	0.39	1630.2	1624.1
<i>opponent type 2 right pole</i>	6.38	0.79	2153.6	2149
<i>opponent type 2 left pole</i>	6.38	0.79	2153.6	2149
<i>opponent type 1 center pole</i>	8.15	0.39	2334.4	2330.5
<i>opponent type 1 right pole</i>	8.39	0.39	2366.8	2362.9
<i>opponent type 1 left pole</i>	8.39	0.39	2366.8	2362.9

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