

```
In[54]:= (* Coin flip, problem 3 *)
```

```
In[55]:= (* Assumption: Coin radius is 1, height is 1 *
```



```
In[55]:=
```

```
In[56]:= (* Time to go back to initial height *)
```

```
In[57]:= timeFunction[v_] := 2 v / 9.8  
timeFunction[4.5]
```

```
Out[58]= 0.918367
```

```
In[59]:= (* Angular velocity is in radians *)
```

```
(* converts angular velocity to degrees per second *)
```

```
angularToDegrees[a_] := a * (180 / Pi)
```

```
(* Function to find where the coin is rotated once it falls back into initial height *)
```

```
finalDegrees[timetofunction_, degrees_] := timetofunction * degrees
```

```
(* Reduces the finalDegrees into a value from 0 to 360 degrees *)
```

```
reducetobounds[finaldegrees_] := finaldegrees - (360 * Floor[finaldegrees / 360])
```