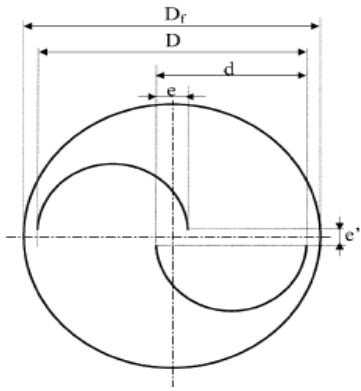


	A	B	C	D	E	F	G	H	I	J	K	L
1	TIP TO SPEED R = λ											
2												
3	STUDENT _____											
4	TEAM _____											
5												
6												
7	$\lambda = \frac{\text{(Turbine Tip Speed)}}{\text{(Wind Speed)}}$			Sample Calculation:								
8												
9	Turbine Tip Speed = Circumference x Revolutions per second											
10												
11												
12	C = πD <input type="text" value="TS = (<math>\pi D</math>) * (rps)"/> <input type="text" value="mph/mps"/> <input type="text" value="2.24"/>											
13	<input type="button" value="INPUT"/> <input type="button" value="CALACULATED"/>											
14												
15	Wind Speed <input type="text" value="11.5"/> mph <input type="text" value="5.134"/> mps											
16												
17	Turbine rotation <input type="text" value="600"/> RPM <input type="text" value="10"/> rps											
18												
19	Turbine Diameter <input type="text" value="5.5"/> in <input type="text" value="0.1397"/> m											
20												
21	$\lambda =$ <input style="background-color: yellow;" type="text" value="0.8549"/>											
22												
23	Note:											
24	λ depends upon the aerodynamic properties of the wind turbine											
25	The aerodynamic performance is a combination of Drag and Lift											
26												
27	DRAG <input style="background-color: yellow;" type="text" value="1 > <math>\lambda</math> > 1"/> LIFT											
28												
29												
30	1 Calculate λ for wind velocity 10 mph to 17 mph											
31	2 Plot λ vs wind speed											
32												
33												
34												
35												
36												
37												