

$x :=$	1 in	1184.41 lbf
	2 in	612.996 lbf
	3 in	-227.32 lbf
	4 in	-1522.84 lbf
	5 in	-1538.42 lbf
	6 in	-1140.14 lbf
	7 in	-815.868 lbf
	8 in	-728.132 lbf
	9 in	-825.251 lbf
	10 in	-658.097 lbf
	11 in	-58.2408 lbf
	12 in	1566.58 lbf
	13 in	1684.55 lbf
	14 in	2455.66 lbf

$F :=$

$$i := 0..13$$

$$x_i := (i + 1) \cdot in$$

$F :=$	1184.41	· lbf
	612.996	
	-227.32	
	-1522.84	
	-1538.42	
	-1140.14	
	-815.86	
	-728.132	
	-825.251	
	-658.097	
	-58.2408	
	1566.58	
	1684.55	
	2455.66	

$$vs := cspline(x, F)$$

$$sfn(xx) := interp(vs, x, F, xx) \quad lfn(xx) := linterp(x, F, xx)$$

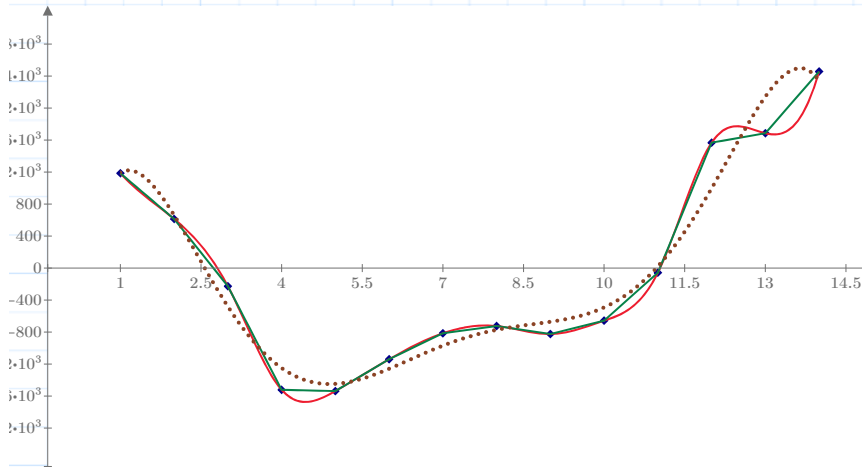
$$\int_{\min(x)}^{\max(x)} sfn(s) ds = -173.444 \text{ ft} \cdot \text{lbf}$$

$$\int_{\min(x)}^{\max(x)} lfn(s) ds = -152.244 \text{ ft} \cdot \text{lbf}$$

$$xx := 1 \text{ in}, 1.1 \text{ in}..14 \text{ in}$$

$$pfn := polyfit(x, F, 6)$$

$$\int_{\min(x)}^{\max(x)} pfn(s) ds = -139.475 \text{ ft} \cdot \text{lbf}$$



F (lbf)
 $sfn(xx)$ (lbf)
 $lfn(xx)$ (lbf)
 $pfn(xx)$ (lbf)

x (in)
 xx (in)