

desmos

Math Tools ▼

Resources ▼

Eric ▼



$$k = 0.13 \cdot 4.45$$

$$= 0.5785$$



Spring constant in  $\frac{N}{mm}$



$$L_{max} = 10.5$$

$$= 10.5$$



$$L_{engaged} = 4.7$$

$$= 4.7$$



$$F_{engaged} = (L_{max} - L_{engaged}) \cdot k$$

$$= 3.3553$$



$$L_{min} = 3.2$$

$$= 3.2$$



$$F_{min} = (L_{max} - L_{min}) \cdot k$$

$$= 4.22305$$



$F_{min}$  Is the force required for max compression. For



our purpose, we need it do be  $\sim 4mm$  in length, but for



sizing the servo, I will assume it's going to min  $L$



Assuming arm length of  $15mm$



$$A = 0.0015$$

$$= 0.0015$$



$$T = F_{min} \cdot 0.0015$$

$$= 0.006334575$$

So,  $SG_{90}$  should work...

