

Title *Tension force with which a taut string pulls*

Ingredients	Sketch	
	At/Through	t
	Owner	System
	Quantity	Tension force
	Variable	$\vec{F}_{T,STR \rightarrow SYS}$
	Giver	Attached taut string

Recipe	Diagram the relationship	<i>(No memorized formula for $F_{T,STR \rightarrow SYS}$)</i>
	Graphically present quantities	<p>Force diagram</p> <p>directed from system back into taut string</p>
	Mathematical relationship	<p><i>(No memorized formula for $F_{T,STR \rightarrow SYS}$)</i></p> <p>Direction of $\vec{F}_{T,STR \rightarrow SYS}$ = Pull, back into taut string</p>

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Title: Tension force with which a taut string pulls

The top half of this sheet consists of an “**Ingredients**” section with a row labeled “Sketch”, a row labeled “At/Through”, a row labeled “Owner”, a row labeled “Quantity”, a row labeled “Variable”, and a row labeled “Giver.”

Sketch: Sphere surrounded by dashed system bubble; horizontal string attached to sphere and extending toward right.

Remaining rows of Ingredients section are used for a flowchart illustrating the following: At time t , Owner System exists and receives Quantity Tension force, denoted by Variable $F\text{-vector-sub-T,STR-on-sys}$, given by Giver Attached taut string.

The bottom half of this sheet consists of a “**Recipe**” section with a row labeled “Diagram the relationship”, a row labeled “Graphically present quantities”, and a row labeled “Mathematical relationship”.

Diagram the relationship

Note in parentheses: No memorized formula for $F\text{-sub-T,STR-on-sys}$

Graphically present quantities

Title: Force diagram

Dot represents system. Tension force arrow originates from dot, points to the right, and is labeled $F\text{-sub-T,STR-on-sys}$. Direction of tension force arrow is emphasized by a caption that reads, “directed from system back into taut string”, with an arrow pointing from the caption to the tip of the tension-force arrow.

Mathematical relationship

Note in parentheses: No memorized formula for $F\text{-sub-T,STR-on-sys}$

Direction of $F\text{-vector-sub-T,STR-on-sys}$ = Pull, back into taut string