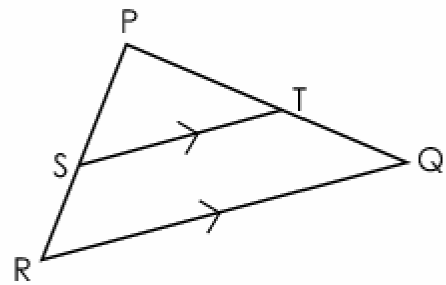
Triangle PQR is shown, where $\overline{ST}$ is parallel to $\overline{RQ}$.



Marta wants to prove that $\frac{SR}{PS} = \frac{TQ}{PT}$.

Statements	Reasons
1. $\overline{ST} \parallel \overline{RQ}$	1. Given
2. $\angle PST \cong \angle R$ and $\angle PTS \cong \angle Q$	2. If two parallel lines are cut by a transversal, then corresponding angles are congruent.
3. $\triangle PQR \sim \triangle PTS$	3.
4.	4.
5. PR = PS + SR, PQ = PT + TQ	5. Segment addition postulate
6. $\frac{PS + SR}{PS} = \frac{PT + TQ}{PT}$	6. Substitution
7. $\frac{PS}{PS} + \frac{SR}{PS} = \frac{PT}{PT} + \frac{TQ}{PT}$	7. Commutative property of addition
8. $\frac{SR}{PS} = \frac{TQ}{PT}$	8. Subtraction property of equality

$\frac{PR}{PS} = \frac{PQ}{PT}$	$\frac{PS}{SR} = \frac{PT}{ST}$	$\angle P \cong \angle P$
AA Similarity	ASA Similarity	SSS Similarity
Reflexive property	Segment addition postulate	Corresponding sides of similar triangles are proportional.
Corresponding sides of similar triangles are congruent.	If two parallel lines are cut by a transversal, then alternate interior angles are congruent.	If two parallel lines are cut by a transversal, then alternate exterior angles are congruent.