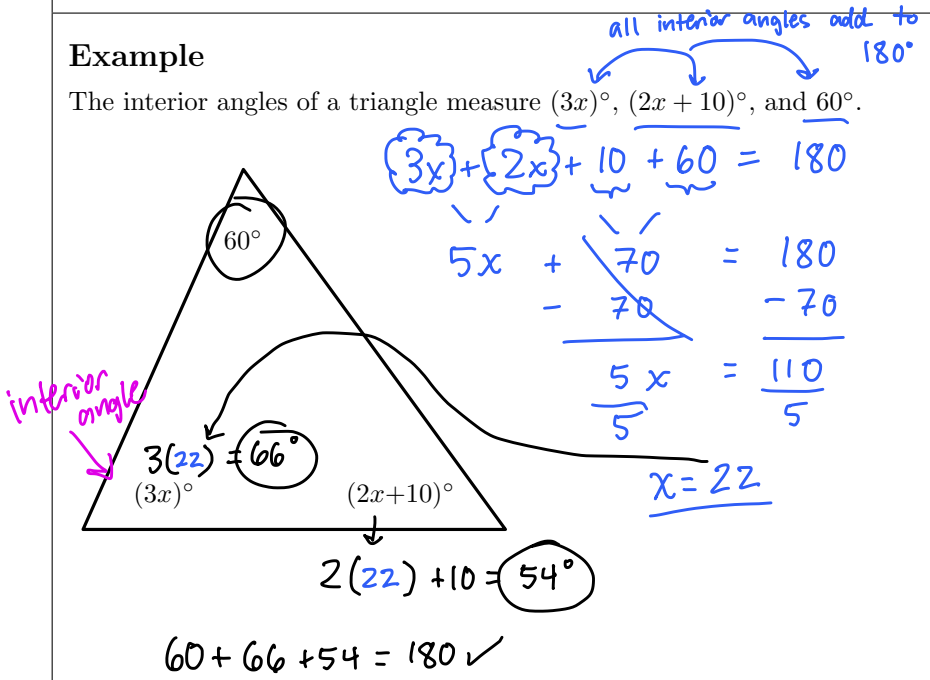
Artifact 8 – Triangle Sum Theorem

Vocabulary interior angle · triangle sum theorem · isosceles triangle

Example

The interior angles of a triangle measure $(3x)°$, $(2x+10)°$, and $60°$.



Notes to Forgetful Self

→ All three interior angles of any triangle must add to 180°.

→ Combine like terms to solve more efficiently ($3x + 2x = 5x$)

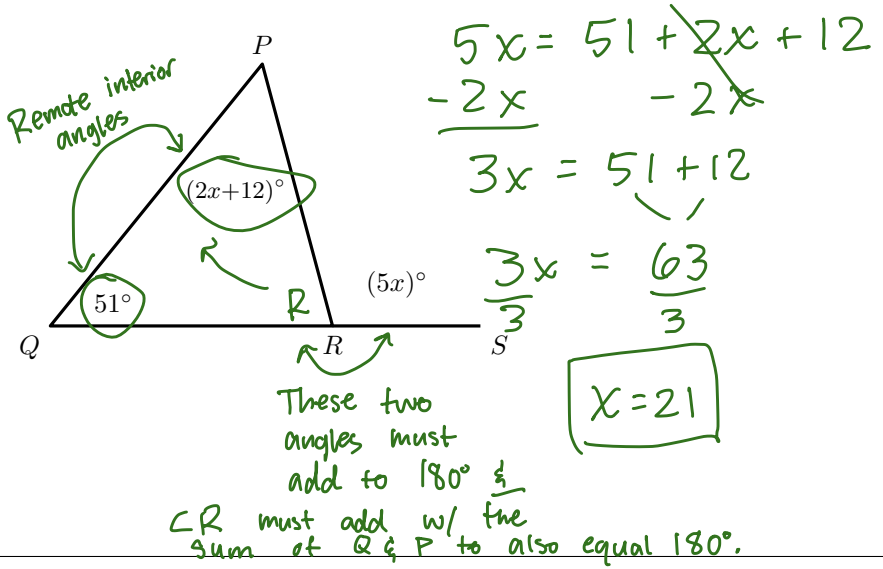
→ Check your work by checking to make sure all three angles add to 180°.

Artifact 9 – Exterior Angle Theorem

Vocabulary exterior angle · remote interior angles · exterior angle theorem

Example

Side QR of triangle PQR is extended to S. The exterior angle at R measures $(5x)°$. The two remote interior angles measure $(2x+12)°$ and $51°$.



Notes to Forgetful Self

→ The sum of the two remote interior angles of a triangle must equal the exterior angle.

→ If there is a variable term on both sides of the equation, you must move one to the other side (undo addition or subtraction).