ASSIGNMENT 1

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21 May 2020

PROBLEM

Exercise 8.1, Q36

The side AB and BC and median AM of one triangle ABC are respectively equal to sides PQ and QR and median PN of triangle PQR. Show that:

1)$\triangle ABM \cong \triangle PQN$
2) $\triangle ABC \cong \triangle PQR$

CODES

Download the python code from

./codes/triangle_python.py

and latex code from

./fig/triangle_fig.tex

FIGURES

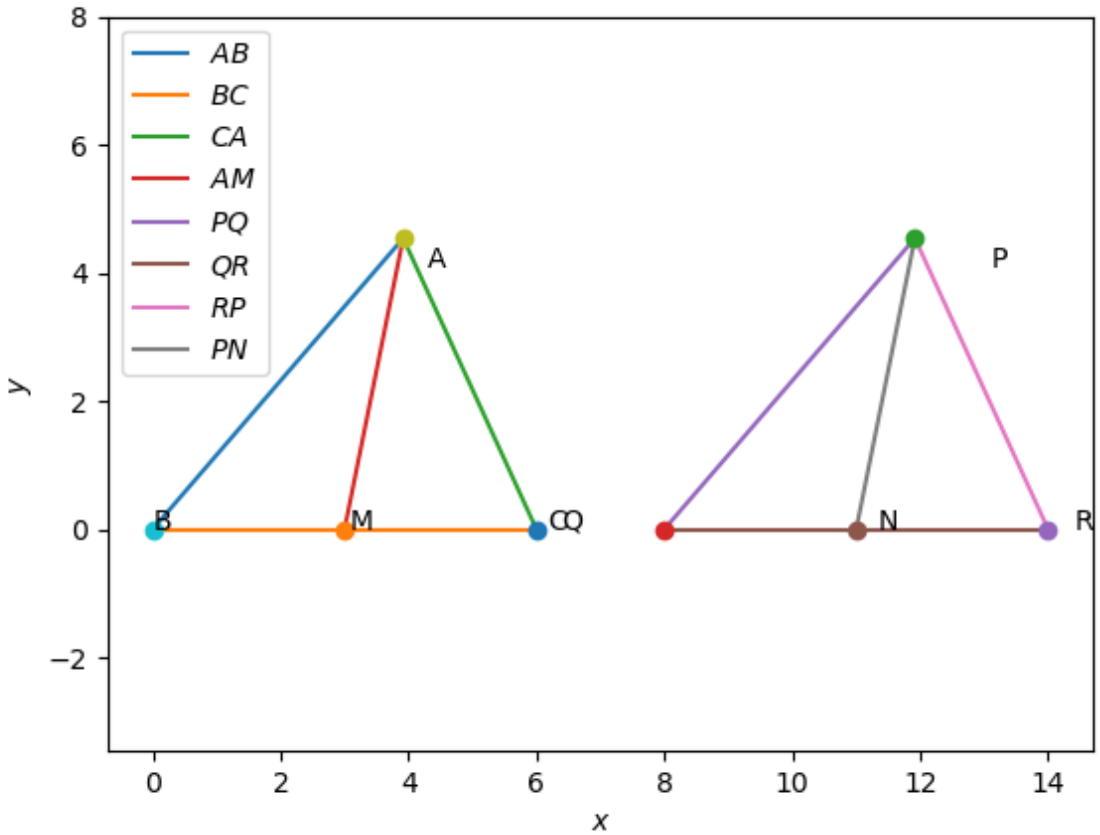

Figure: $\triangle ABC$ and $\triangle PQR$ using Python

FIGURES

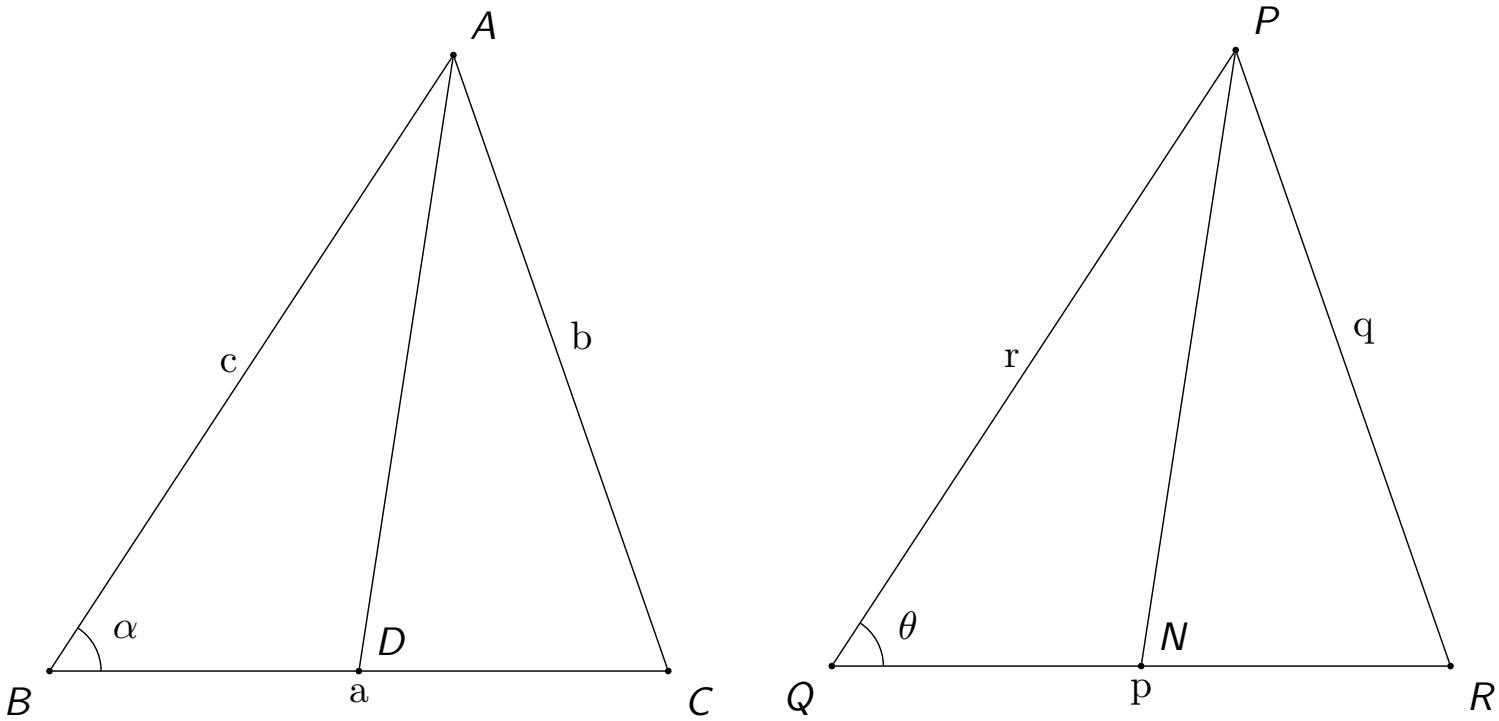

Figure: $\triangle ABC$ and $\triangle PQR$ using Latex

SOLUTION

1) In triangle ABM and triangle PQN

AB = PQ (Given)
AM = PN (Given)
Since BC = QR and M , N are midpoints of BC and QR respectively,
BM = QN
Therefore by SSS congruence rule, $\triangle ABM \cong \triangle PQN$

This implies that $\angle ABM = \angle PQN$ .....(i)

SOLUTION

2) In triangle ABC and triangle PQR

AB = PQ (Given)
$\angle ABC = \angle PQR$ [From (i)]
BC = QR (Given)

Therefore by SAS congruence rule, $\triangle ABC \cong \triangle PQR$

The End