Congruent shapes and matching parts

6 questions | 11 marks

Equivalent correct methods earn the corresponding marks.

1. If $\triangle ABC \cong \triangle DEF$, name the angle corresponding to angle B. [1 mark]

The second vertices B and E correspond.

Answer: Angle E.

2. If $\triangle ABC \cong \triangle PQR$, name the side corresponding to AC. [1 mark]

A pairs with P and C pairs with R.

Answer: PR.

3. Given $\triangle ABC \cong \triangle XYZ$ and BC = 9 cm, find YZ. [2 marks]

BC and YZ are corresponding sides, so their lengths are equal.

Answer: 9 cm.

4. Two congruent triangles have corresponding angle measures $3x$ degrees and 72°. Find x. [2 marks]

$3x = 72$, so $x = 72/3 = 24$.

Answer: $x = 24$.

5. Given $\triangle DEF \cong \triangle LMN$, angle D = 42° and angle E = 78°. Find angle N. [3 marks]

Angle F is $180 - 42 - 78 = 60°$.

F corresponds to N.

Answer: 60°.

6. A shape is reflected in a mirror line. Explain why its image is congruent to the original. [2 marks]

A reflection reverses orientation but does not stretch or shrink the shape.

Answer: Reflection preserves every side length and angle, so the shape and size remain unchanged.