

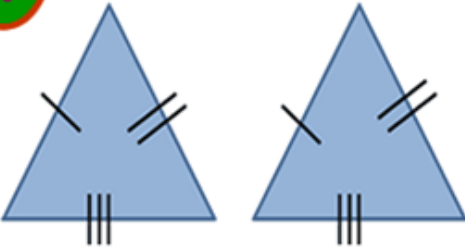
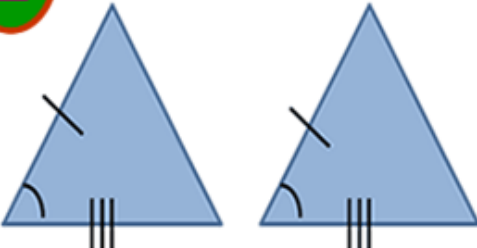
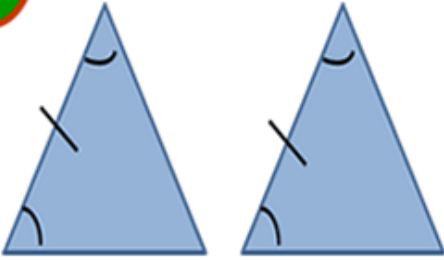
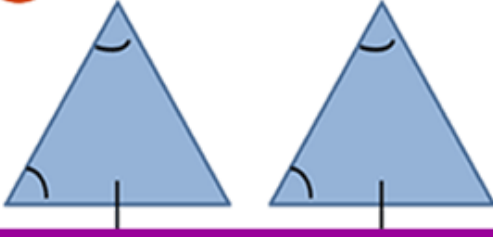
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NCERT Class 7 Mathematics Solutions: Chapter 7 – Congruence of Triangles Exercise 7.1 Part 1

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Triangle Congruence

<div style="background-color: yellow; border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto; font-size: 24px; font-weight: bold; color: red;">1</div> <div style="background-color: yellow; padding: 5px; margin-top: 5px; text-align: center;">Side Side Side (SSS)</div> <div style="text-align: center; margin-top: 10px;"></div>	<div style="background-color: yellow; border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto; font-size: 24px; font-weight: bold; color: red;">2</div> <div style="background-color: yellow; padding: 5px; margin-top: 5px; text-align: center;">Side Angle Side (SAS)</div> <div style="text-align: center; margin-top: 10px;"></div>
<div style="background-color: yellow; border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto; font-size: 24px; font-weight: bold; color: red;">3</div> <div style="background-color: yellow; padding: 5px; margin-top: 5px; text-align: center;">Angle Side Angle (ASA)</div> <div style="text-align: center; margin-top: 10px;"></div>	<div style="background-color: yellow; border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto; font-size: 24px; font-weight: bold; color: red;">4</div> <div style="background-color: yellow; padding: 5px; margin-top: 5px; text-align: center;">Angle Angle Side (AAS)</div> <div style="text-align: center; margin-top: 10px;"></div>

1. Complete the following statements:

(a) Two line segments are congruent if _____.

(b) Among two congruent angles, one has a measure of 70° , the measure of other angle is_____.

(c) When we write $\angle A = \angle B$, we actually mean_____.

Answer:

(a) Two line segments are congruent if they have the same length.

(b) Among two congruent angles, one has a measure of 70° , the measure of other angle is 70°

(c) When we write $\angle A = \angle B$, we actually mean $m\angle A = m\angle B$.

2. Give any two real time examples for congruent shapes.

Answer:

(i) Two footballs

(ii) Two teacher's tables.

3. If $\triangle ABC \cong \triangle FED$ under the correspondence $ABC \longleftrightarrow FED$, write all the corresponding congruent parts of the triangles.

Answer:



Given,

$$\triangle ABC \cong \triangle FED$$

The corresponding congruent parts of the triangles are:

(i) $\angle A \leftrightarrow \angle F$

(ii) $\angle B \leftrightarrow \angle E$

(iii) $\angle C \leftrightarrow \angle D$

(iv) $\overline{AB} \leftrightarrow \overline{FE}$

(v) $\overline{BC} \leftrightarrow \overline{ED}$

$$(vi) \overline{AC} \leftrightarrow \overline{FD}$$

4. If $\triangle DEF \cong \triangle BCA$, write the part (s) of $\triangle BCA$ that correspond to:

$$(i) \angle E$$

$$(ii) \overline{EF}$$

$$(iii) \angle F$$

$$(iv) \overline{DF}$$

Answer:



$$\triangle DEF \cong \triangle BCA$$

$$(i) \angle E \leftrightarrow \angle C$$

$$(ii) \overline{EF} \leftrightarrow \overline{CA}$$

$$(iii) \angle F \leftrightarrow \angle A$$

$$(iv) \overline{DF} \leftrightarrow \overline{BA}$$