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| --- |
| **Bronze** |

Look at each set of triangles. Write the letters of the congruent pair in each case.

|  |  |
| --- | --- |
| **1** | **2** |
|  |  |
| **3** | **4** |
|  |  |
| **5** | **6** |
|  |  |

|  |
| --- |
| **Silver** |

Look at each set of triangles. Identify a pair of congruent triangles - if possible.

When it is possible, write the condition that proves they are congruent.

|  |  |
| --- | --- |
| **1** | **2** |
|  |  |
| **3** | **4** |
|  |  |
| **5** | **6** |
|  |  |
| **Gold** | |

You are given information about a pair of triangles.

Decide whether the pair of triangles is congruent or not.

If they are, state the condition that proves they are congruent.

|  |  |  |
| --- | --- | --- |
| **1** |  |  |
| AC = 10 cm  BC = 6 cm  ∠ABC = 45° | and | PQ = 6 cm  PR = 10 cm  ∠QPR = 45° |
| **2** |  |  |
| AC = 12 cm  AB = 13 cm  ∠ACB = 90° | and | LN = 13 cm  MN = 12 cm  ∠LMN = 90° |
| **3** |  |  |
| ∠DEF = 70°  ∠DFE = 70°  ∠EDF = 40° | and | ∠XYZ = 70°  ∠XZY = 40°  ∠YXZ = 70° |
| **4** |  |  |
| BC = 12 cm  ∠ABC = 85°  ∠ACB = 41° | and | XZ = 12 cm  ∠XYZ = 54°  ∠XZY = 85° |
| **5** |  |  |
| QR = 12 cm  ∠PQR = 100°  ∠PRQ = 25° | and | XY = 12 cm  ∠XYZ = 25°  ∠YXZ = 100° |
| **6** |  |  |
| AB = 9 cm  AC = 8 cm  ∠BAC = 55° | and | DE = 8 cm  EF = 9 cm  ∠DEF = 55° |

Answers

Bronze

1. A and B
2. A and D
3. A and D
4. A and B
5. B and D
6. B and C

Silver

1. ASA
2. SSS
3. RHS or SSS if Pythagoras’ theorem applied
4. ASA
5. None congruent
6. SAS

Gold

1. Not congruent
2. RHS or SSS if Pythagoras’ theorem applied
3. Not congruent
4. Not congruent
5. ASA
6. SAS