Task 1 **Resources: Ruler, protractor, paperclip**
Follow the guidelines to complete the task.
1. Measure the length of the **longest** side of each triangle (the red strip).
2. Measure the length of the blue side of each triangle.
3. Use a **protractor** to find an angle of **40**° in each given triangle. Use a paperclip to mark the position of the angle on the triangles.
4. What do they all have in common? However, which two triangles are congruent and why?
5. What do you notice about the position of the angle?
6. Can any two triangles be congruent if given any two sides and any angle?

Task 2

Follow the guidelines to complete the task.

1. Measure the sides of all 3 triangles. List the measurements in the table provided.

Triangle A	Triangle B	Triangle C

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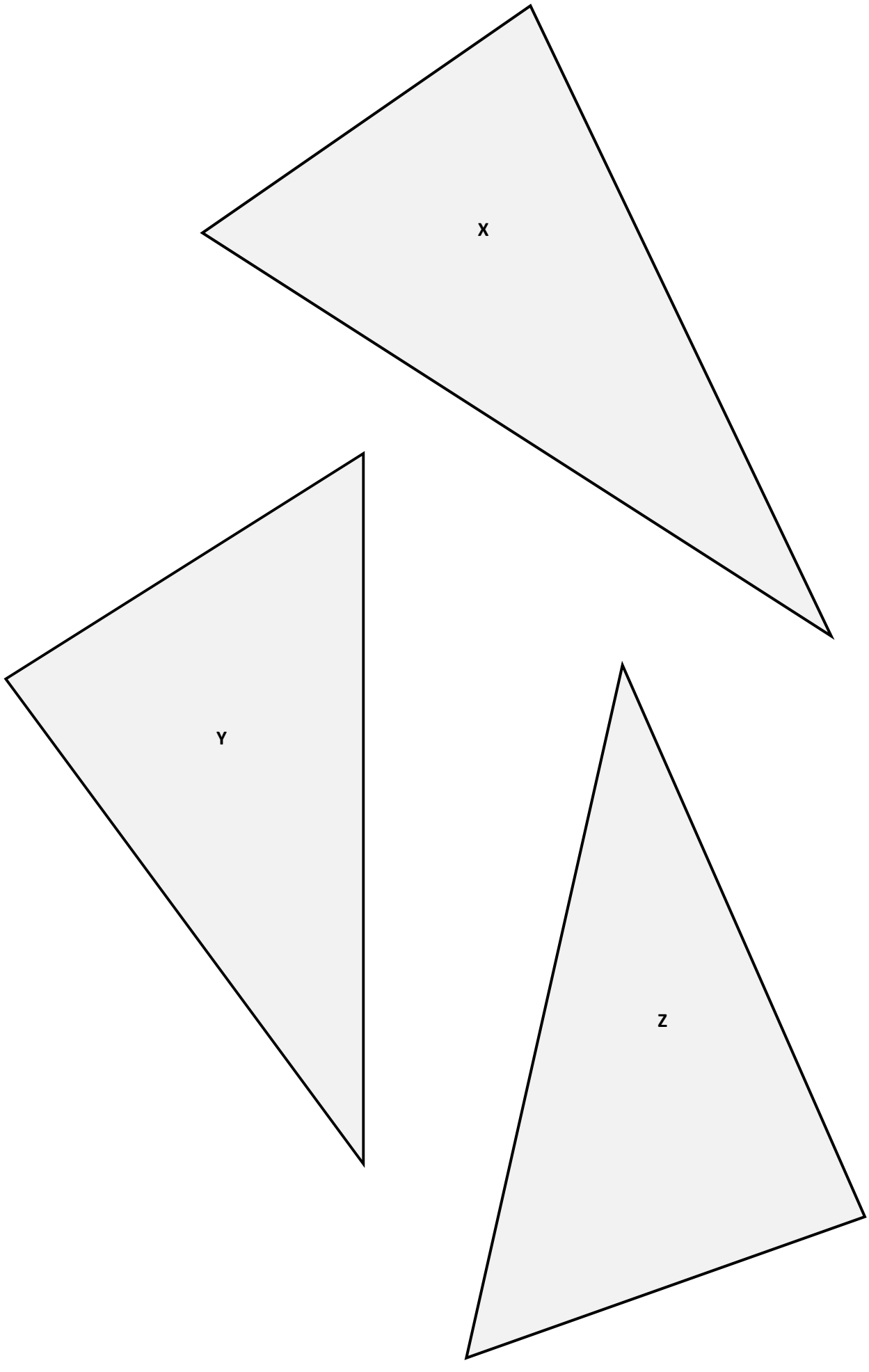
2. Which triangles are congruent and why?


X
Y
Z

Task 3 **Resources: Geostrips, Ruler, Protractor, Paperclip**
Follow the guidelines to complete the task.
1. Measure the **hypotenuse** and the **red side** of the given triangle.
2. What type of triangle is this? right-angled, isosceles, equilateral
3. Mark the right-angle using a paperclip on the given triangle.
4. Use the other strips provided. Can you create another right-angled triangle using the same length for the **hypotenuse** and **white side**, but a **different** length for the third side?
5. If two right-angled triangles are congruent, what can you conclude about the three sides of the two triangles?

Task 4 **Resources: Calculator**
Follow the guidelines to complete the task.
1. Each triangle below is given the length of one side and two of the angles.
NOTE! The diagrams are not drawn to scale, you cannot use a ruler or protractor. You may use a calculator if your wish.
2. What do all three triangles have in common?
3. Which two triangles are exactly the same? Give two reasons.