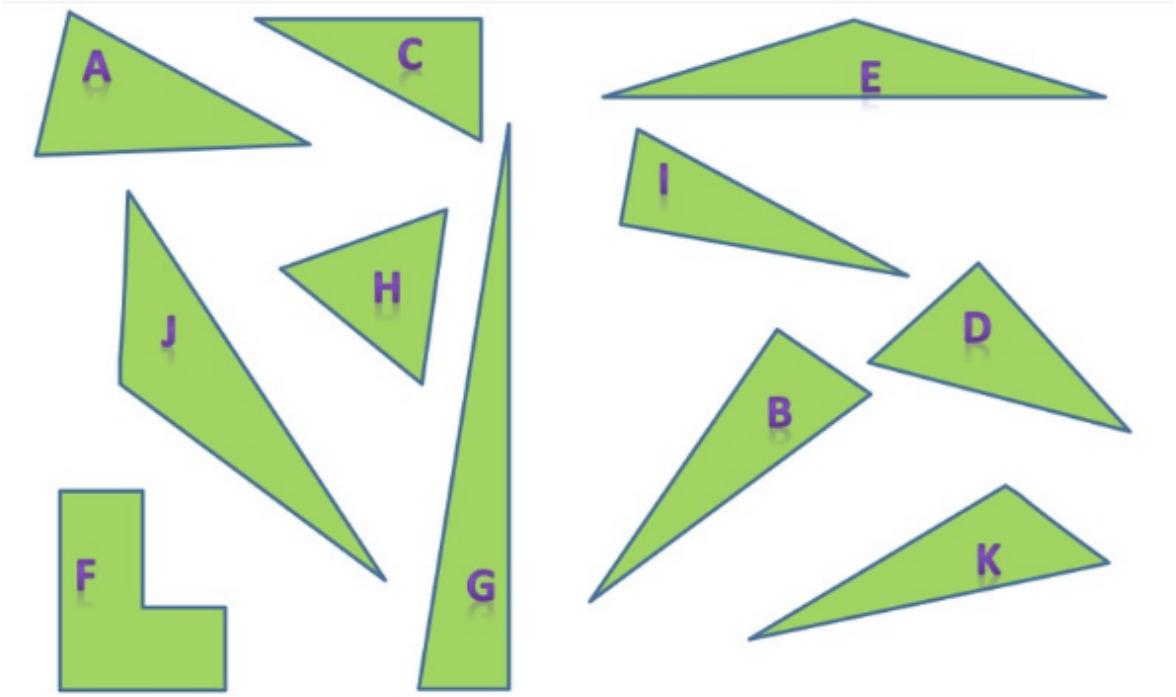
Are these right?

a. Which of the polygons are right triangles? Choose a measuring tool to help you determine this.



These are right triangles	These are not right triangles

b. For each right triangle, identify the right angle by marking it with a small square. Explain why the other polygons are not right triangles.

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Commentary

The purpose of this task is for students to measure angles and decide whether the triangles are right or not. Students should already understand concepts of angle measurement (4.MD.5) and know how to measure angles using a protractor (4.MD.6) before working on this task. Students should also understand that a defining attribute for a right triangle is that one of the three angles is 90 degrees. The task asks students to choose the appropriate tool which gives them a chance to decide for themselves what they will need to answer the question, thus allowing them to use appropriate tools strategically (MP5).

The triangles in this task are smaller than most classroom protractors, so students have several choices. They might extend the sides of the triangle using a ruler. It might help them to cut out the shapes and place them on another piece of paper. A second and slightly more difficult method is to leave the polygons on the page and list the letters for the polygons in the appropriate entries of the table. For this students will need to manipulate the protractor or the orientation of the paper instead of rotating the shape itself, which can also serve a useful purpose later on. Alternatively, students might use the corner of a piece of paper that they have measured and know is 90 degrees, and then compare the angle formed by the edges of the paper with the angles in the triangles.

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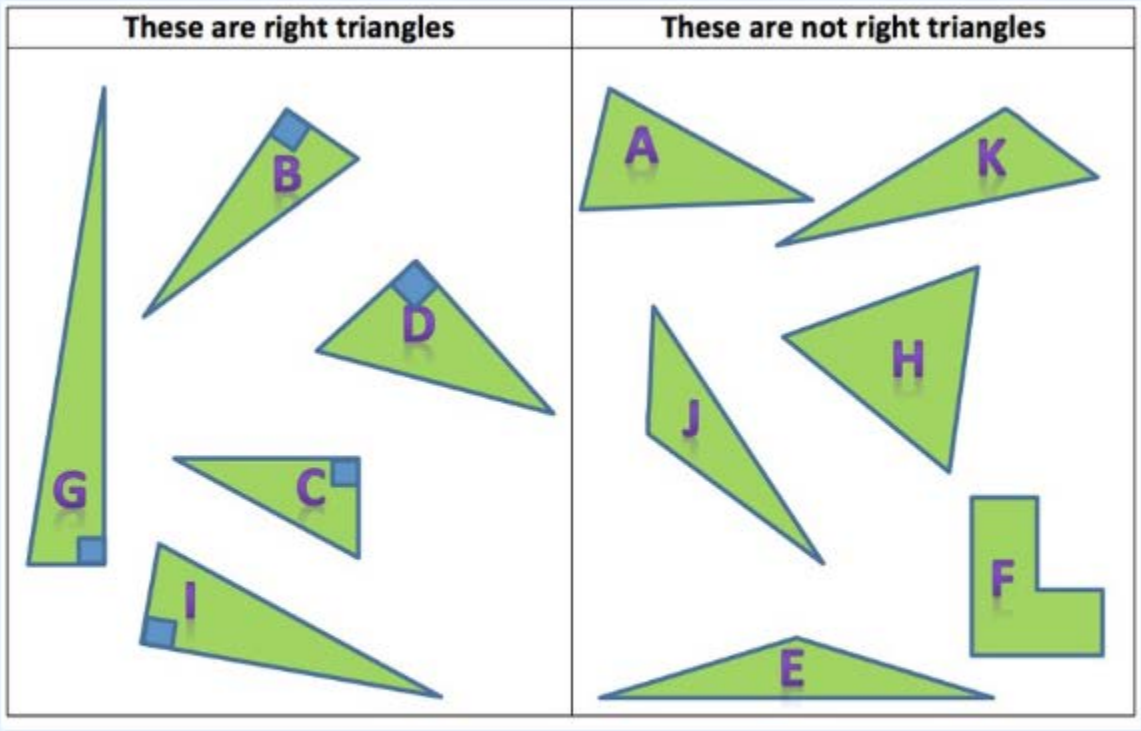
Solution

a.



b. Triangles B, C, D, G, and I each have one right angle.

Triangles A, K, J, H, and E do not have any right angles, but they are all triangles because they have three sides and three angles. F is not a triangle because it has 6 sides. It does have right angles.

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