Which One Doesn't Belong?

Purpose

Use this routine to help students devise a reason for the option they choose. It will also help teachers see what students are noticing as they look at different math concepts and give students the opportunity to use vocabulary terms and expand upon their thinking and reasoning.

Time

5 - 15 minutes

Supported Standards

MP. 1 Make sense of problems and persevere in solving them.
MP. 3 Construct viable arguments and critique the reasoning of others.

Materials

- Completed worksheet with mathematical diagrams, expressions, and equations of Which One Doesn't Belong.
- [Which One Doesn't Belong website](#) - This is a helpful resource to choose a Which One Doesn't Belong diagram that is relevant to the lesson you are teaching.

Procedure

This routine can be done with an individual student or with a group. The activity can also be done in person or remotely. The routine is meant to have students identify differences between four options and to devise the reasoning behind their choice.

1. Give the student(s) the worksheet "Which One Doesn't Belong." The worksheet should consist of at least four choices. This can also be displayed on a shared screen.

2. Tell students that there is no right or wrong answer. This is important to mention to students as they often think that math problems always have right or wrong answers.

3. Tell students that they need to choose which one they think doesn't belong and have a reason behind their choice.

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4. Once students have made their decision and have a reason, they can share their choice and reasoning with the teacher and any other students. The teacher should also share which one he/she picked and explain the reasoning behind it.

5. After students present their choices, this activity could be extended to think of a reason why each choice might not belong.

Optional extra practice:

If this is done in a small group, students could gather with other students who chose the same option and come up with the best reason to present to the group.

Students could also find a partner who chose a different option and try to convince the other student why their choice is a better pick.

Example

Below is an example of a geometry problem that asks which one doesn't belong.

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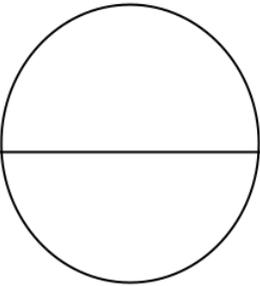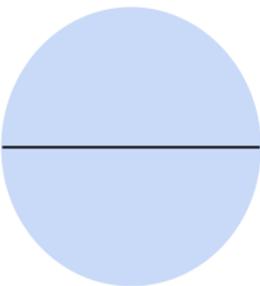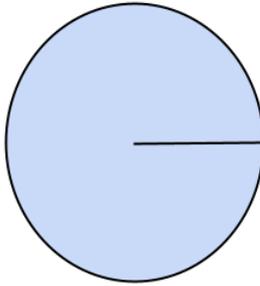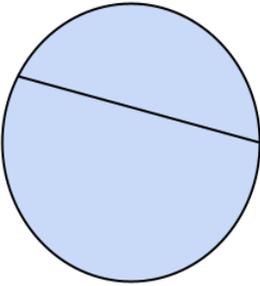
Possible Student Responses:

    A. Doesn't belong because it has a line all the way across the box, or because it's white and the others are blue.

    B. Doesn't belong because it's the only one to have a diameter, or because it doesn't have a black line around the circle (circumference).

    C. Doesn't belong because it's the only one to have a radius.

    D. Doesn't belong because the line doesn't go through the center of the circle (it has a chord, not a radius or a diameter).