

Reasoning and Problem Solving

Step 2: Compare and Order Angles

National Curriculum Objectives:

Mathematics Year 4: (4G4) [Identify acute and obtuse angles and compare and order angles up to two right angles by size](#)

Mathematics Year 4: (4G2a) [Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Identify which of 2 shapes contains the largest or smallest angle. Angles presented on a horizontal base line.

Expected Identify which of 3 shapes contains the largest or smallest angle. All angles including a horizontal or vertical side.

Greater Depth Identify which of 4 complex shapes contains the largest or smallest angle. Angles in any orientation.

Questions 2, 5 and 8 (Reasoning)

Developing Explain whether a statement is correct. Includes 2 angles to compare.

Expected Explain whether a statement is correct. Includes 3 angles to compare.

Greater Depth Explain whether a statement is correct. Includes 4 angles to compare with more than one possible answer.

Questions 3, 6 and 9 (Problem Solving)

Developing Work out if 3 different pairs of lines, when matched, form a set of angles in ascending or descending size order. Up to 3 angles per question, presented on a horizontal base line.

Expected Work out if 4 different pairs of lines, when matched, form a set of angles in ascending or descending size order. Up to 4 angles per question. All angles including a horizontal or vertical side.

Greater Depth Work out if 4 different pairs of lines, when matched, form a set of angles in ascending or descending size order. Up to 4 angles per question. Angles in any orientation.

More [Year 4 and Year 5 Properties of Shapes](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Compare and Order Angles

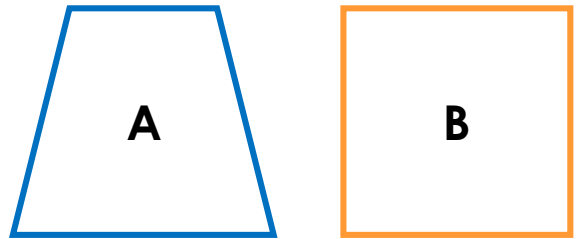
Compare and Order Angles

1a. Which of these shapes contains the largest angle?



4 PS

1b. Which of these shapes contains the smallest angle?



4 PS

2a. Ali is discussing angles.



Ali

I think that an angle of 45° is smaller than an obtuse angle.

Is Ali correct? Explain your answer.



4 R

2b. Meg is discussing angles.



Meg

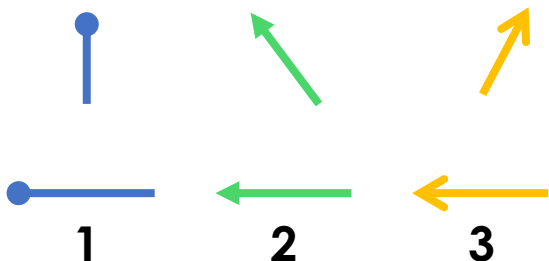
I think that an angle of 110° is smaller than a right angle.

Is Meg correct? Explain your answer.



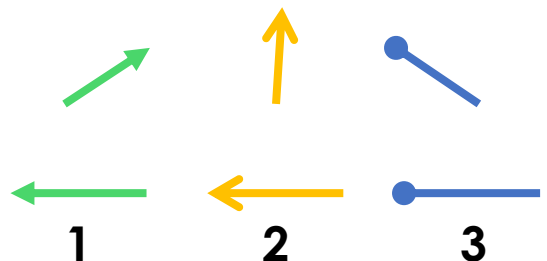
4 R

3a. If you join together the end points of the matching lines below, do they make 3 angles in order from smallest to largest? Be sure to compare the smallest side of each angle created.



4 PS

3b. If you join together the end points of the matching lines below, do they make 3 angles in order from largest to smallest? Be sure to compare the smallest side of each angle created.

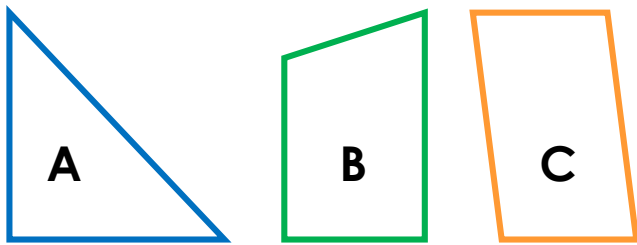


4 PS

Compare and Order Angles

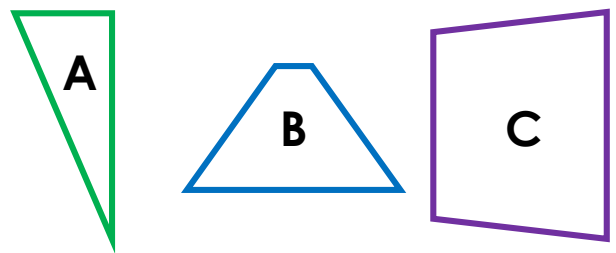
Compare and Order Angles

4a. Which of these shapes contains the smallest angle?



4 PS

4b. Which of these shapes contains the largest angle?



4 PS

5a. Sol is discussing angles.



I have 3 angles. One angle is acute, one is a right angle and the other is 170° . I think that the right angle is the smallest angle.

Is Sol correct? Explain your answer.



4 R

5b. Zoe is discussing angles.



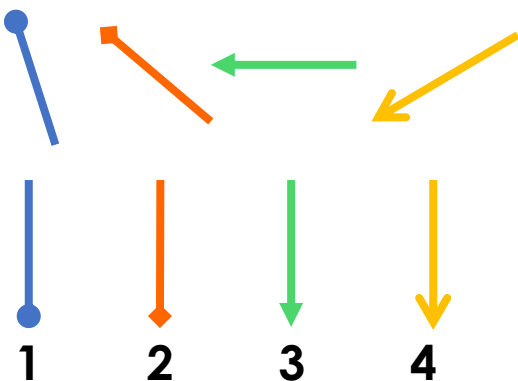
I have 3 angles. One is 89° , one is a right angle and the other is obtuse. I think that the obtuse angle is the smallest angle.

Is Zoe correct? Explain your answer.



4 R

6a. If you join together the end points of the matching lines below, do they make 4 angles in order from largest to smallest? Be sure to compare the smallest side of each angle created.



1

2

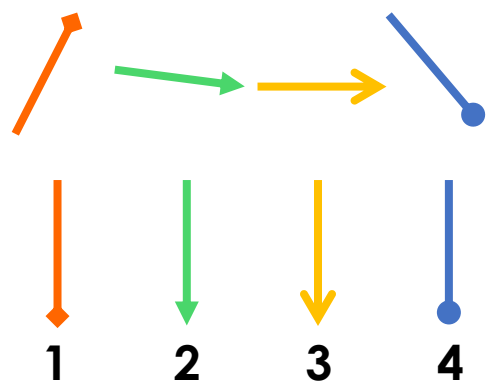
3

4



4 PS

6b. If you join together the end points of the matching lines below, do they make 4 angles in order from smallest to largest? Be sure to compare the smallest side of each angle created.



1

2

3

4

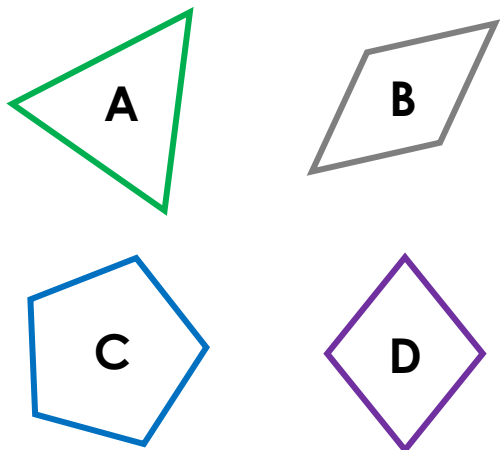


4 PS

Compare and Order Angles

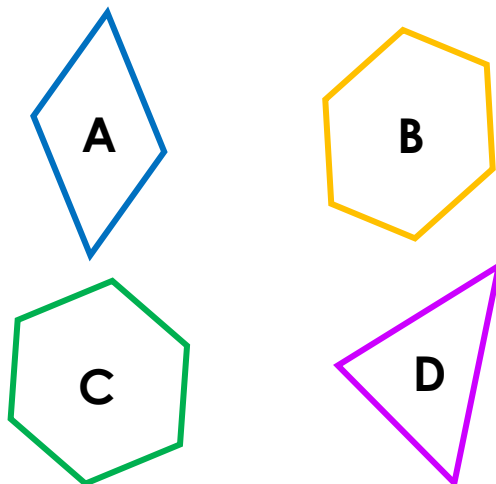
Compare and Order Angles

7a. Which of these shapes contains the largest angle?



4 PS

7b. Which of these shapes contains the smallest angle?



4 PS

8a. Zane is discussing angles.



I have 4 angles. One angle is 135° , one is obtuse, one is a right angle and the other is 73° . I think that the 135° angle is the largest angle.

Is Zane correct? Explain your answer.



4 R

8b. Hal is discussing angles.



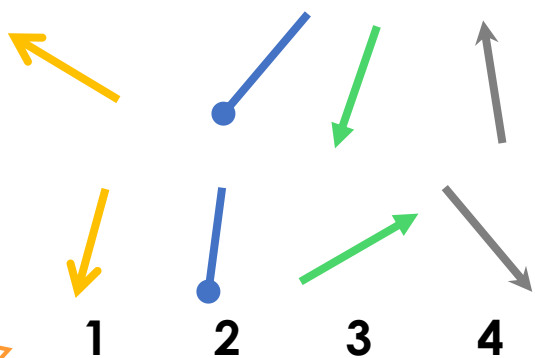
I have 4 angles. One is obtuse, one is 90° , one is acute and one is 25° . The 90° angle must be the 2nd largest angle.

Is Hal correct? Explain your answer.



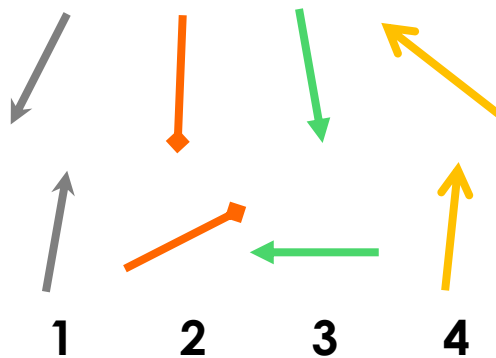
4 R

9a. If you join together the end points of the matching lines below, do they make 4 angles in order from smallest to largest? Be sure to compare the smallest side of each angle created.



4 PS

9b. If you join together the end points of the matching lines below, do they make 4 angles in order from largest to smallest? Be sure to compare the smallest side of each angle created.



4 PS

Reasoning and Problem Solving Compare and Order Angles

Developing

- 1a. Shape A
- 2a. Ali is correct because an obtuse angle is more than 90° but less than 180° .
- 3a. No, the correct order would be 2, 1, 3.

Expected

- 4a. Shape A
- 5a. Sol is incorrect because an acute angle is smaller than a right angle.
- 6a. Yes, the angles are ordered correctly.

Greater Depth

- 7a. Shape B
- 8a. Zane might be correct but he doesn't know the exact size of the other obtuse angle which could be larger.
- 9a. No. The correct order would be 2, 1, 3, 4.

Reasoning and Problem Solving Compare and Order Angles

Developing

- 1b. Shape A
- 2b. Meg is incorrect because a right angle is 90° and 110° is larger.
- 3b. Yes, the angles are ordered correctly.

Expected

- 4b. Shape B
- 5b. Zoe is incorrect because the 89° angle is smaller than the right angle and an obtuse angle.
- 6b. No, the correct order would be 4, 2, 3, 1.

Greater Depth

- 7b. Shape D
- 8b. Hal is correct. The obtuse angle is the largest and the acute and 25° angles are less than 90° .
- 9b. Yes, the angles are ordered correctly.