

Max's Geometry Garden Adventure

Learning objective: To identify, measure, and estimate angles, and to distinguish between acute, obtuse, and reflex angles.

Help Max the monkey solve the puzzles in the garden by using your knowledge of angles. Remember to use your protractor accurately and keep your pencil sharp!

Max is designing a new playground for his forest friends. He has drawn several wooden climbing frames that create different shapes. Max knows that a full turn is 360 degrees and a half turn is 180 degrees. He needs to make sure the monkey bars are safe! A right angle is exactly 90 degrees. If an angle is less than 90 degrees, it is acute. If it is between 90 and 180 degrees, it is obtuse. Any angle greater than 180 degrees is a reflex angle. Max has measured the first climbing frame and found an angle of 45 degrees. He wants to ensure all his structures are strong and stable.

Word bank: acute · obtuse · reflex · right angle · protractor · degrees · vertex · straight line

1. Max measures the corner of a wooden platform and finds it is exactly 90 degrees. What is the specific name for this type of angle? (1 mark)

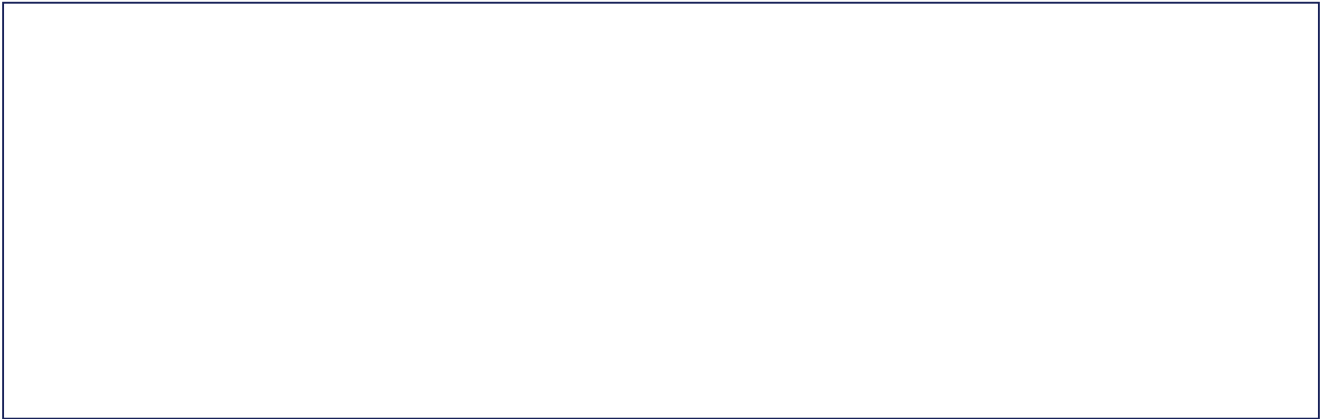
2. If Max measures an angle on a climbing frame and it is 125 degrees, is it an acute, obtuse, or reflex angle? Explain how you know. (2 marks)

3. A gate in the garden swings open to form a 210-degree angle. Is this angle larger or smaller than a straight line (180 degrees)? What is this type of angle called? (2 marks)

4. Max has an angle that measures 35 degrees. How many more degrees would he need to add to reach a right angle? (2 marks)

5. Draw an angle that you estimate to be 60 degrees. Use your protractor to check if your drawing is accurate. (2 marks)

Draw: Draw a bird's-eye view of a garden path that has three different corners: one acute, one obtuse, and one right angle. Label each angle with its name.



Extension challenge: Max wants to build a triangular climbing frame. The first angle is 40 degrees and the second is 60 degrees. If all angles in a triangle add up to 180 degrees, what is the size of the third angle?