

Parent Guide for Student Success

For use with Chapter 2

Chapter Overview One way that you can help your student succeed in Chapter 2 is by discussing the lesson goals in the chart below. When a lesson is completed, ask your student to interpret the lesson goals for you and to explain how the mathematics of the lesson relates to one of the key applications listed in the chart.

<i>Lesson Title</i>	<i>Lesson Goals</i>	<i>Key Applications</i>
2.1: Conditional Statements	Recognize and analyze a conditional statement. Write postulates about points, lines, and planes using conditional statements.	<ul style="list-style-type: none"> • Flowers • Advertising • Research Buggy
2.2: Definitions and Biconditional Statements	Recognize and use definitions and biconditional statements.	<ul style="list-style-type: none"> • Snow Leopards • Musical Groups • Winds at Sea
2.3: Deductive Reasoning	Use symbolic notation to represent logical statements. Form conclusions by applying the laws of logic to true statements.	<ul style="list-style-type: none"> • Civil Rights Memorial • Kolob Arch • Robotics
2.4: Reasoning with Properties from Algebra	Use properties from algebra. Use properties of length and measure to justify segment and angle relationships.	<ul style="list-style-type: none"> • Fitness • Auto Racing • Pay Raises
2.5: Proving Statements about Segments	Justify statements about congruent segments. Write reasons for steps in a proof.	<ul style="list-style-type: none"> • Bridges • Carpentry • Optical Illusion
2.6: Proving Statements about Angles	Use angle congruence properties. Prove properties about special pairs of angles.	<ul style="list-style-type: none"> • Scissors • Wall Trim • Picture Frames

Test-Taking Strategy

Making sure you understand directions is the test-taking strategy featured in Chapter 2 (see page 122). Be sure your student is familiar with directions that are likely to be on a test. It is important to answer the right question and to write answers in the form requested. Encourage your student to listen carefully to spoken directions at the beginning of a test and to ask questions about any directions, written or spoken, that are not understood.

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Key Ideas Your student can demonstrate understanding of key concepts by working through the following exercises with you.

Lesson	Exercise
2.1	Rewrite the conditional statement in if-then form. Then decide whether the statement is <i>true</i> or <i>false</i> . If false, provide a counterexample. "It is winter in December."
2.2	Rewrite the true statement in if-then form and write the converse. If the converse is true, combine it with the if-then statement to form a true biconditional statement. If the converse is false, provide a counterexample. "Two perpendicular lines form right angles."
2.3	Use the Law of Syllogism to write the statement that follows from the pair of true statements. If Roger earns money, he buys new clothes. If Roger works, he earns money.
2.4	Use the transitive property of equality to complete the statement. If $m\angle K = 90^\circ - m\angle J = m\angle M$, then _____.
2.5	Let H be a point in your home, W be a point where you work, and S be a point in your student's school. Suppose $HW = HS$. How could you prove $\overline{HW} \cong \overline{HS}$?
2.6	Make a sketch using the given information. Then, state all of the pairs of congruent angles. $\angle ABC$ and $\angle CBD$ are adjacent and supplementary. $\angle CBD$ and $\angle DBE$ are also adjacent and supplementary.

Home Involvement Activity

Directions: Think of three or four folk beliefs. For example, some people believe that it is going to rain when grandpa's arthritis hurts. State each belief as a conditional statement. State each converse. If the statement is true, must the converse also be true? If so, provide a biconditional statement. If possible, find a counterexample for each belief. If not, discuss how you could prove the statement is true.

2.1: If it is December, then it is winter; false; *Sample answer:* It is summer in December in Australia.
2.2: If two lines are perpendicular, then they form right angles; If two lines form right angles, then they are perpendicular; true; Two lines are perpendicular if and only if they form right angles.
2.3: If Roger works, he buys new clothes. **2.4:** $m\angle K = m\angle M$ **2.5:** by the definition of congruent segments **2.6:** $\angle ABC \cong \angle DBA$ and $\angle CBD \cong \angle ABE$

Answers