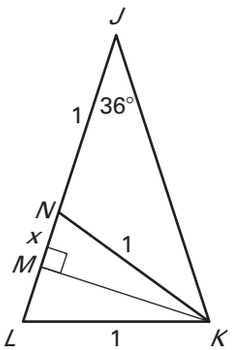
Name _____ Date _____

LESSON 7.6

Challenge Practice

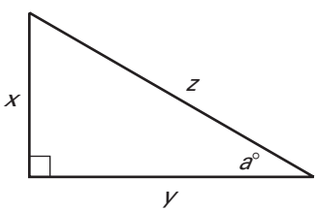
For use with pages 473–480

In Exercises 1–3, use the diagram of $\triangle JKL$.



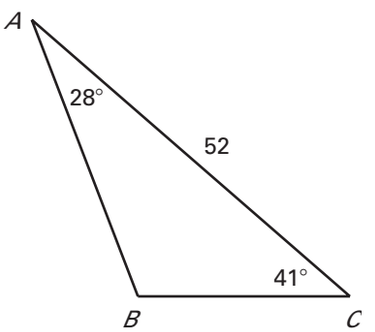
1. Show that $\triangle JLK \sim \triangle KLN$.
2. Use the similar triangles in Exercise 1 to find and solve a proportion involving x.
3. Name an 18° angle in the diagram. What is the exact value of sin 18° in radical form? How does this value compare to the value of x?

In Exercises 4 and 5, use the diagram.



4. Write an expression for $(\sin a°)^2 + (\cos a°)^2$ in terms of x, y, and z. Then use the Pythagorean Theorem to simplify the expression.
5. Suppose $\sin a° = 0.6$. What is the value of $\cos a°$?

6. In the diagram of $\triangle ABC$ at the right, find AB and BC. Round decimals to the nearest tenth.



7. **Critical Thinking** Explain why the sine ratio is always less than or equal to 1.
8. **Critical Thinking** Explain why the cosine ratio is always less than or equal to 1.