

Name _____

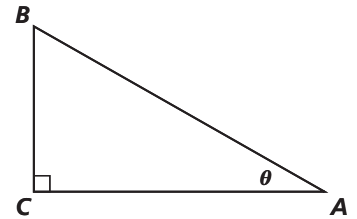
10-1B Lesson Master

Questions on SPUR Objectives
See Student Edition pages 724–727 for objectives.

VOCABULARY

1. **Fill in the Blanks** Refer to the diagram at the right.

- a. The *leg adjacent* to θ is _____.
- b. The *leg opposite* θ is _____.
- c. The *hypotenuse* is _____.



2. **Fill in the Blanks** Write the name of a trigonometric ratio.

- a. The _____ of $\theta = \frac{\text{length of leg opposite } \theta}{\text{length of leg adjacent to } \theta}$.
- b. The _____ of $\theta = \frac{\text{length of leg opposite } \theta}{\text{length of hypotenuse}}$.
- c. The _____ of $\theta = \frac{\text{length of leg adjacent to } \theta}{\text{length of hypotenuse}}$.

SKILLS Objective A

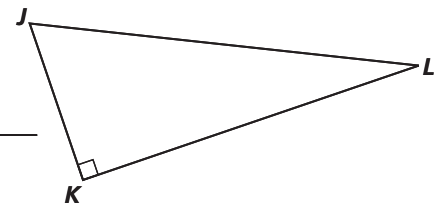
In 3–14, approximate the value to the nearest thousandth.

- | | | |
|-----------------------------|-----------------------------|-----------------------------|
| 3. $\sin 28^\circ =$ _____ | 4. $\tan 50^\circ =$ _____ | 5. $\cos 62^\circ =$ _____ |
| 6. $\sin 62^\circ =$ _____ | 7. $\tan 89^\circ =$ _____ | 8. $\cos 7.7^\circ =$ _____ |
| 9. $\cos 11^\circ =$ _____ | 10. $\sin 50^\circ =$ _____ | 11. $\tan 43^\circ =$ _____ |
| 12. $\cos 89^\circ =$ _____ | 13. $\tan 9^\circ =$ _____ | 14. $\sin 9^\circ =$ _____ |

PROPERTIES Objective E

15. Refer to the triangle at the right and give each ratio in terms of JK , KL , and JL .

- | | |
|---------------------|---------------------|
| a. $\sin J =$ _____ | b. $\cos L =$ _____ |
| c. $\tan J =$ _____ | d. $\tan L =$ _____ |
| e. $\cos J =$ _____ | f. $\sin L =$ _____ |



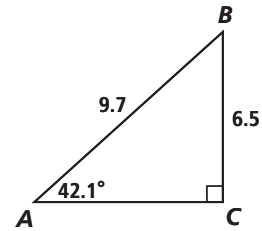
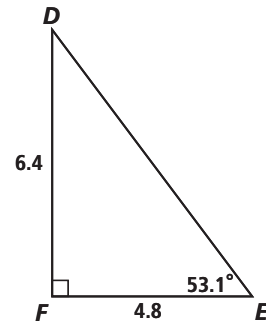
16. Use a 45-45-90 triangle to explain why $\sin 45^\circ = \cos 45^\circ = \frac{\sqrt{2}}{2}$.

Name _____

10-1B

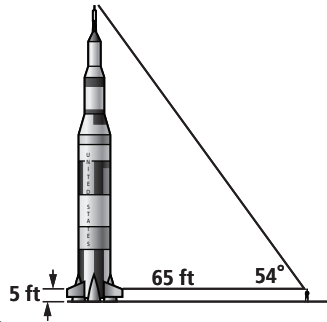
page 2

17. Write an equation that can be solved to calculate the length of side \overline{DE} in the triangle at the right using
- the sine function. _____
 - the cosine function. _____
 - the Pythagorean Theorem. _____
18. Write an equation that can be solved to calculate the length of side \overline{AC} in the triangle at the right using
- the tangent function. _____
 - the cosine function. _____
 - the Pythagorean Theorem. _____



USES Objective G

19. A ship sails 64 kilometers on a bearing of 20° . How far east of its original position is the ship, to the nearest tenth of a kilometer?
20. Dennis sights the top of a rocket at 54° when he stands 65 ft away. He is 5 ft tall. About how tall is the rocket?



21. A straight water slide makes a 40° angle with the surface of the water. If the slide is 11.5 meters high, how long is it?
22. Juanita used an instrument to sight the top of a building and got an angle measure of 62° . She is 5 ft tall and stood 35 ft from the building. About how tall was the building?

