Name _____ Class _____ Date _____

10-6 Practice

Form K

Trigonometric Ratios

For ΔABC and ΔXYZ, find the value of each expression.

1. sin A

2. cos A

3. cos B

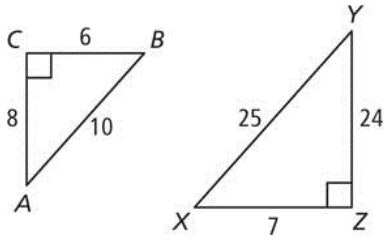
4. tan B

5. tan X

6. cos X

7. tan Y

8. sin Y



Find the value of each expression. Round to the nearest ten-thousandth.

9. sin 25°

10. tan 35°

11. cos 30°

12. tan 15°

13. sin 60°

14. cos 45°

15. sin 85°

16. cos 5°

17. tan 70°

For each right triangle, find the missing side length to the nearest tenth.

18. The hypotenuse is 9 cm long. How long is the side adjacent to a 30° angle?

19. A 60° angle has an opposite leg 12 ft long. How long is the adjacent leg?

20. A 36° angle has an adjacent leg 22 yd long. How long is the hypotenuse?

21. The hypotenuse is 45 mm long. How long is the side adjacent to a 45° angle?

Name _____ Class _____ Date _____

10-6 Practice (continued) *Form K*

Trigonometric Ratios

For each right triangle described, find all three angles to the nearest tenth.

22. The hypotenuse is 6 in. long. The adjacent side is 2 in. long.

23. The opposite side is 25 mm long. The adjacent side is 20 mm long.

24. The hypotenuse is 12 inches long. The opposite side is 5 inches long.

25. The adjacent side is 2 ft long. The opposite side is 7 ft long.

26. The hypotenuse is 75 cm long. The opposite side is 40 cm long.

27. The opposite side is 36 ft long. The adjacent side is 32 ft long.

28. Jack is standing 25 feet away from the base of a flagpole. There is a 38° angle of elevation as he looks at the top of the flagpole. If Jack is 6 feet tall, how tall is the flagpole to the nearest tenth of a foot?

29. Reasoning If the two acute angles of a right triangle are labeled A and B, what is the relationship between sin A and cos B and between sin B and cos A? Use a 30°-60°-90° triangle to justify your conjecture.