Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Unit 5 TEST REVIEW

Use Pythagorean theorem to solve for the missing side. Leave your answer in simplest radical form:

1. 2.

x = \_\_\_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_\_

Use special right triangles to solve for the missing sides:

3. 4. 5.

X \_\_\_\_\_\_\_\_ a \_\_\_\_\_\_\_\_\_ u \_\_\_\_\_\_\_\_

Y \_\_\_\_\_\_\_\_ b \_\_\_\_\_\_\_\_\_ v \_\_\_\_\_\_\_\_\_

6. 7. 8.



x \_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_\_

y \_\_\_\_\_\_\_\_ y \_\_\_\_\_\_\_\_\_ y \_\_\_\_\_\_\_\_\_\_

9. 10. 11.



x \_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_\_ a \_\_\_\_\_\_\_\_

y \_\_\_\_\_\_\_\_ y \_\_\_\_\_\_\_\_\_ b \_\_\_\_\_\_\_\_\_

12. Write the **ratios**: 13. Write the **ratios**:

Sin A \_\_\_\_\_\_ Sin A \_\_\_\_\_\_\_

Cos A \_\_\_\_\_\_ Cos A \_\_\_\_\_\_\_

Tan A \_\_\_\_\_\_ Tan A \_\_\_\_\_\_\_



Solve for the missing angles:

14. 15. 16.

\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Solve for the missing sides:

17. 18. 19.



\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

20. 21. 22.



\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Use the Law of Sines:

23. AB 24. BC



\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

Use the Law of Sines:

25. $∠$B 26. $∠$C



\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

Use the Law of Cosines:

27. AB 28. AB



\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

29. $∠$C 30. $∠$A

\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

Use the trig formula for area of a triangle to find the area:

 31. 32. 33.



29

28

\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Find the area of the regular polygons:

34. 35.



\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

36. 37.



\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

\*The sin of an angle = the cos of its complement\*

Write an equivalent trig expression for each problem:

38. \_\_\_\_\_\_\_\_ cos 48 39. \_\_\_\_\_\_\_ sin 24 40. Sin 31 \_\_\_\_\_\_\_\_

A. cos 42 A. cos 66

B. sin 42 B. sin 66

C. sin 48 C. cos 24

41.



42. $∆$ABC $\~$ $∆$DEF

cos B = $\frac{3}{5}$ cos E = \_\_\_\_\_\_\_\_\_\_

43. \_\_\_\_

44. Emily is stuck at the top of a 60 foot ferris wheel. She sees Jacob on the ground at a 58° angle of depression. How far is Jacob from the ferris wheel?

45. Hunter is standing 10 feet away from a tree. He is looking at a little kitten stuck in the tree at a 53°angle of elevation. How high up is the kitten in the tree?

46. A plane is flying at an altitude of 4000 feet. When it begins its descent the pilot sees the airport at a 10° angle of depression. How far will the plane fly to reach the airport?

47. A dog sees a squirrel on a 10 foot fence at a 29° angle of elevation. How far is the dog from the fence?