#  Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13-1 to 13-5 Test Review

#  Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block \_\_\_\_\_

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| **OBJ: Know how to solve a right triangle.** *1-6: Find each missing value. Round sides to the nearest tenth & angles to degrees and minutes*4.27.3cABC |
| **1.**  b14.7c32°11’ABC | **2.** | **3.** A = 14°, C = 90°, a = 6  |
| A = \_\_\_\_\_\_\_\_ b = \_\_\_\_\_\_\_\_ c = \_\_\_\_\_\_\_ | A = \_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_ c = \_\_\_\_\_\_\_ | B = \_\_\_\_\_\_\_\_ b = \_\_\_\_\_\_\_\_ c = \_\_\_\_\_\_\_ |
| **4.** A = 64°12’, C = 90°, c = 12.8 | **5.** C = 90°, a = 15, b = 13  | **6.** CB 1658°caA |
| B = \_\_\_\_\_\_\_\_ a = \_\_\_\_\_\_\_\_ b = \_\_\_\_\_\_\_ | A = \_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_ c = \_\_\_\_\_\_\_ | B = \_\_\_\_\_\_\_\_ a = \_\_\_\_\_\_\_\_ c = \_\_\_\_\_\_\_ |
| **OBJ: Know how to solve a special right triangle without a calculator, which means no decimal answers!***7-12: Find the missing side lengths (x and y) without a calculator.* |
| **7.** 5 yx30°x = \_\_\_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_\_\_ | **8.** y45° 8xx = \_\_\_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_\_\_ | **9.**1660°xyx = \_\_\_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_\_\_ |
| **10.** 4 yx 30°x = \_\_\_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_\_\_ | **11.** x 8  y 60°x = \_\_\_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_\_\_ | **12.**x 5y45°x = \_\_\_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_\_\_ |
| **OBJ: Find the 6 trigonometric ratios when given 2 sides of a right triangle.** *13-14: Find the exact values of the six trigonometric functions of the given angleθ.* 129 θ |
| **13.**1013 θ sin θ = \_\_\_\_\_\_\_\_\_\_\_\_\_ csc θ = \_\_\_\_\_\_\_\_\_\_\_\_\_  cos θ = \_\_\_\_\_\_\_\_\_\_\_\_\_ sec θ = \_\_\_\_\_\_\_\_\_\_\_\_\_  tan θ = \_\_\_\_\_\_\_\_\_\_\_\_\_ cot θ = \_\_\_\_\_\_\_\_\_\_\_\_\_  | **14.**  sin θ = \_\_\_\_\_\_\_\_\_\_\_\_\_ csc θ = \_\_\_\_\_\_\_\_\_\_\_\_\_  cos θ = \_\_\_\_\_\_\_\_\_\_\_\_\_ sec θ = \_\_\_\_\_\_\_\_\_\_\_\_\_  tan θ = \_\_\_\_\_\_\_\_\_\_\_\_\_ cot θ = \_\_\_\_\_\_\_\_\_\_\_\_\_  |
| **OBJ: Find the 6 trigonometric ratios when given the coordinate of a terminal side of an angle in standard position.** *15-16: The terminal side of θ in standard position contains each point. Find the exact values of the six trigonometric functions ofθ.* |
| **15.** (-3, 9) sin θ = \_\_\_\_\_\_\_\_ csc θ = \_\_\_\_\_\_\_\_  cos θ = \_\_\_\_\_\_\_\_ sec θ = \_\_\_\_\_\_\_\_  tan θ = \_\_\_\_\_\_\_\_ cot θ = \_\_\_\_\_\_\_\_  | **16.** (0, 4) sin θ = \_\_\_\_\_\_\_\_ csc θ = \_\_\_\_\_\_\_\_  cos θ = \_\_\_\_\_\_\_\_ sec θ = \_\_\_\_\_\_\_\_  tan θ = \_\_\_\_\_\_\_\_ cot θ = \_\_\_\_\_\_\_\_  |
| **OBJ: Know how to solve an acute or obtuse triangle using the Law of Sines and/or Cosines.***17-20:**Find the missing sides and angles (Round sides to the nearest tenth & angles to degrees and minutes).* 1512°25CBAb |
| **17.**122217CAB | **18.** |
| A = \_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_ C = \_\_\_\_\_\_\_\_\_\_ | A = \_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_ b = \_\_\_\_\_\_\_\_\_\_ |
| **19.**cBCA120°6312 | **20.** A = 58°, b = 11, c = 18  |
| A = \_\_\_\_\_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_\_\_\_ c = \_\_\_\_\_\_\_\_\_\_ | B = \_\_\_\_\_\_\_\_\_\_\_ C = \_\_\_\_\_\_\_\_\_\_\_ a = \_\_\_\_\_\_\_\_\_\_ |
| **OBJ: Know how to find the area of a triangle that does not have the height given.***21-23: Find the area of each triangle rounded to the nearest tenth.* |
| **21.** BAC120° 7389 | **22.** *(#18 above)* 12°25CBA15 | **23.**CAB13149 |
| **OBJ: Apply your knowledge of solving triangles to real-life applications.** *24-28: Solve each word problem below. Round all answers to the nearest tenth.* |
| 1. Joe and Rob are standing in a straight line with the base of a building. The measurement of the angle of elevation to the top of the building from the point where Joe is standing is 38°20’. From the point where Russ is standing, 50 feet closer to the building, the measurement of the angle of elevation is 45°. How tall is the building?
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| 1. How wide (to the nearest tenth) is the pond?

152 ft.131 ft. 45° |
| 1. A pilot 3000 feet above the ocean notes the measure of the angle of depression to a ship is 42°. How far is the plane from the ship?
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| 1. A plane flew 1000 kilometers north. Then it changed direction by turning 20° clockwise and flew for another 700 kilometers. How far was the plane from its starting point?
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| **OBJ: Know how to draw an angle in standard position.****OBJ: Know how to convert from degrees to radians and vice versa.****OBJ: Know how to find the reference angle of any angle.***28-33: Draw each angle. Then rewrite each degree measure in radians and each radian measure in degrees. Then state the reference angle.*  |
| **28.** 30°Radians: \_\_\_\_\_\_\_\_\_\_\_\_\_Reference : \_\_\_\_\_\_\_\_\_\_\_\_\_ | 1. -120°

Radians: \_\_\_\_\_\_\_\_\_\_\_\_\_Reference : \_\_\_\_\_\_\_\_\_\_\_\_\_ | 1. 390°

Radians: \_\_\_\_\_\_\_\_\_\_\_\_\_Reference : \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **31.** Degrees: \_\_\_\_\_\_\_\_\_\_\_\_\_Reference : \_\_\_\_\_\_\_\_\_\_\_\_\_ | **32.** Degrees: \_\_\_\_\_\_\_\_\_\_\_\_\_Reference : \_\_\_\_\_\_\_\_\_\_\_\_\_ | **33.** Degrees: \_\_\_\_\_\_\_\_\_\_\_\_\_Reference : \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **OBJ: Know how to find coterminal angles.***34-41: Find the smallest positive and smallest negative coterminal angles for each given angle in the form it is presented.*+\_+\_+\_ |
| **34.** -380° |  | **35.** 20° | +\_ | **36.** -1500° | **.** | **37.** 900° |  |
|  |  |  |  |
| **38.**  | +\_ | +\_**39.** - |  | **40.** +\_ |  | **41.** +\_ |  |
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