

**Practice for Quiz – Reference angles and exact value**

**Name:**

Sketch the following angles in standard position, and state a coterminal angle.

angle =  $50^\circ$

coterminal angle = \_\_\_\_\_

angle =  $-70^\circ$

coterminal angle = \_\_\_\_\_

angle =  $-120^\circ$

coterminal angle = \_\_\_\_\_



Sketch the following reference triangles in standard position and state their reference angle.

angle =  $200^\circ$

reference angle = \_\_\_\_\_

angle =  $120^\circ$

reference angle = \_\_\_\_\_

angle =  $-30^\circ$

reference angle = \_\_\_\_\_



Find the exact value of each expression below. Draw a reference triangle, identify your reference angle, and then use your knowledge of special triangles to fill in the sides. Check answers using your calculator.

1)  $\sin 30^\circ =$

2)  $\cos 30^\circ =$

3)  $\tan 30^\circ =$

4)  $\cos 225^\circ =$

5)  $\sin 300^\circ =$

6)  $\tan 120^\circ =$

4)  $\tan 150^\circ =$

5)  $\cos 240^\circ =$

6)  $\sin 315^\circ =$

Use your calculator to find the following ratios. If answers are irrational, round to the nearest ten-thousandth.

7)  $\cos 180^\circ =$

8)  $\sin 0^\circ =$

9)  $\tan 90^\circ =$

10)  $\cos 65^\circ =$

11)  $\sin 15^\circ =$

12)  $\tan 200^\circ =$

13)  $\sin 270^\circ =$

14)  $\cos 110^\circ =$

15)  $\tan 359^\circ =$