# Activity 8.1: Radians, Unit Circle & Right-Triangle Trig

**A**

Name: _____ Partner's name: _____ Date: _____

**Directions:** Give exact values (fractions, radicals, or multiples of $\pi$). Problems 3, 4 and 6 use diagrams. Graphs are drawn accurately.

*Work alone, then compare after each problem. If answers differ, find the mistake together.*

**1**

Convert $150°$ to radians.

**Answer:** _____ Match? ☐ Yes ☐ No

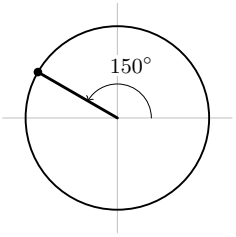
**2**

Find the arc length of a sector with radius 6 and central angle $\frac{\pi}{3}$.

**Answer:** _____ Match? ☐ Yes ☐ No

**3**

Find $\sin 150°$.




**Answer:** _____ Match? ☐ Yes ☐ No

**4**

Find $\cos \frac{2\pi}{3}$.

**Answer:** _____ Match? ☐ Yes ☐ No

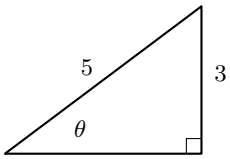
**5**

Find $\tan \frac{3\pi}{4}$.

**Answer:** _____ Match? ☐ Yes ☐ No

**6**

$\theta$ is acute.
Find $\cos\theta$.




**Answer:** _____ Match? ☐ Yes ☐ No

**7**

Find the reference angle for $150°$.

**Answer:** _____ Match? ☐ Yes ☐ No

**8**

Find the angle between $0°$ and $360°$ coterminal with $400°$.

**Answer:** _____ Match? ☐ Yes ☐ No

UNIT 8 • TRIGONOMETRY

# Activity 8.1: Radians, Unit Circle & Right-Triangle Trig

**B**

Name: _____ Partner's name: _____ Date: _____

**Directions:** Give exact values (fractions, radicals, or multiples of $\pi$). Problems 3, 4 and 6 use diagrams. Graphs are drawn accurately.

*Work alone, then compare after each problem. If answers differ, find the mistake together.*

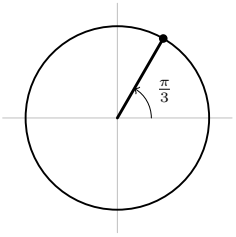
**1** Convert $75° + 75°$ to radians.

**Answer:** _____ Match? ☐ Yes ☐ No

**2** Find the arc length of a sector with radius 12 and central angle $\frac{\pi}{6}$.

**Answer:** _____ Match? ☐ Yes ☐ No

**3** Find $\cos\frac{\pi}{3}$.




**Answer:** _____ Match? ☐ Yes ☐ No

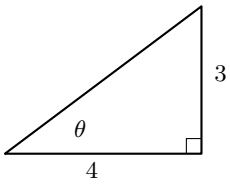
**4** Find $\sin 210°$.

**Answer:** _____ Match? ☐ Yes ☐ No

**5** Find $\tan 135°$.

**Answer:** _____ Match? ☐ Yes ☐ No

**6** $\theta$ is acute.
Find $\cos\theta$.




**Answer:** _____ Match? ☐ Yes ☐ No

**7** Find the reference angle for $210°$.

**Answer:** _____ Match? ☐ Yes ☐ No

**8** Find the angle between $0°$ and $360°$ coterminal with $-320°$.

**Answer:** _____ Match? ☐ Yes ☐ No