Hon Alg 2 Classwork May 8, 2017 Name:

The two units we'll use to measure angles are Degrees and Radians.

The conversion between these two units is the fact that one full circle in degrees is $360°$. When measured in radians a full circle is 2π. There isn't a symbol for radians. Therefore, if there isn't a symbol for degrees (°) then the angle given must be in radians.

Since $360° = 2\pi$ can be reduced to $180° = \pi$ the following conversion factors can be used to convert between degrees and radians:

$$\frac{180°}{\pi} \quad \text{and} \quad \frac{\pi}{180°}$$

Example: Convert $240°$ to radians: Use the conversion factor that cancels the ° symbol then reduce using the GCF of 60:

$$240° \cdot \frac{\pi}{180°} = \boxed{\frac{4\pi}{3}}$$

Convert each. If the angle given is in radians convert to degrees and round to the nearest hundredth when neccessary. If the angle given is in degrees convert to radians. Leave radian answers with the π symbol in it but reduce the fraction if possible.

1. $60°$

2. $\frac{7\pi}{6}$

3. $45°$

4. $\frac{3\pi}{2}$

5. $225°$

6. $\frac{5\pi}{3}$

7. $150°$

8. $\frac{7\pi}{4}$

9. $90°$

10. 13