BECA / Dr. Huson / Geometry 10th Grade
Unit 11: Algebra II introduction Name:
18 May 2020

**11.7 Problem set: Radian measures and standard trigonometry ratios**

1. Two right triangles, $\triangle ABC$ and $\triangle ADE$, are shown in standard position with the coordinates of their vertices marked.

   Identify each true statement.

   ☐ (a) $AC = 1$

   ☐ (b) The altitude of $\triangle ADE$ is $\sqrt{3}$

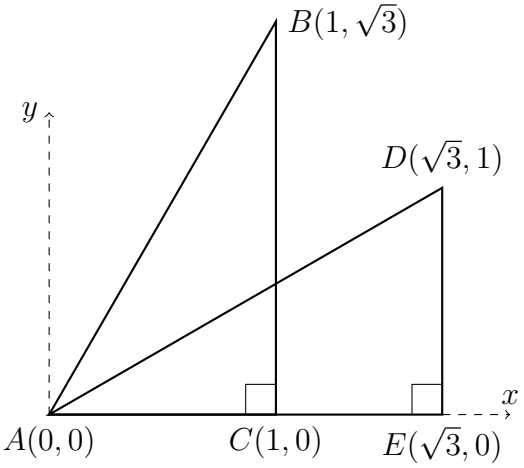
   ☐ (c) $\tan D = \dfrac{1}{\sqrt{3}}$

   ☐ (d) $m\angle B = 60°$

   ☐ (e) $m\angle BAC = 60°$

   ☐ (f) $AD = 2$

   (g) Explain why points $B$ and $D$ are on a circle centered at the origin.




2. Simplify. Rationalize denominators.

   (a) $\sqrt{27}$ (b) $\sqrt{18} + 4\sqrt{3}$ (c) $\dfrac{3}{\sqrt{3}}$

3. Convert the angle radian measure to degrees. (recall $360° = 2\pi$ radians)

   (a) $\dfrac{\pi}{6}$ (b) $\dfrac{\pi}{4}$ (c) $\dfrac{2\pi}{3}$

4. Convert the degree measure to radians (state an *exact* value, i.e. a fraction times $\pi$).

   (a) $60°$ (b) $45°$ (c) $135°$