**Study Guide and Homework**

***Areas of Circles and Sectors***

**Areas of Sectors** A sector of a circle is a region bounded by a central angle and its intercepted arc.

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| **Area of a Sector** | If a sector of a circle has an area of *A* square units, a central angle measuring *x*°, and a radius of *r* units, then *A* = $\frac{x}{360}$π$r^{2}$. |

**Example: Find the area of the shaded sector.**

*A* = $\frac{x}{360}$ ⋅ π$r^{2}$ Area of a sector

 = $\frac{36}{360}$ ⋅ π$(5)^{2}$ *x* = 36 and *r* = 5

 ≈ 7.85 Use a calculator.

The area of the sector is about 7.85 square inches.

**Exercises**

**Find the area of each shaded sector. Round to the nearest tenth.**

** 1. 2. 3.**

 **4. 5. 6.**

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** 7. SANDWICHES** For a party, Samantha wants to have finger sandwiches. She cuts sandwiches into circles. If she cuts each circle into three congruent pieces, what is the area of each piece?