MATH 152

Today

1. WeBWorK/Questions
2. 9.4 Polar area

Goals:

1. 9.4 Polar area (Understand how to find the area enclosed by a curve described in polar coordinates)

Where is today's material used?

1. Polar coordinates are useful for describing phenomena with some kind of circular symmetry.

9.4 Polar area

1. **Theorem:** The area of the region enclosed by the polar curve $r = f(\theta)$ for $\theta \in [\alpha, \beta]$ is $\int_{\alpha}^{\beta} \frac{1}{2} r^2 d\theta$.
2. Examples: 9.4, p. 528: 1, 5-8, 9-12, 15-18, 21, 25

Next Time

1. 7.5 Surface Area and review
2. Turn in WeBWorK 9.4 Set19-PolarArea: 1, 4