NAME _____ DATE _____ PERIOD _____

Practice

Area Under a Curve

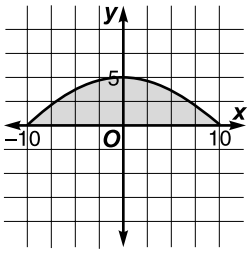
Use limits to find the area between each curve and the x-axis for the given interval.

1. $y = x^3$ from $x = 0$ to $x = 2$

2. $y = x^2$ from $x = 1$ to $x = 6$

Use limits to evaluate each integral.

3. $\int_1^5 x^3\,dx$

4. $\int_1^3 x^4\,dx$

5. ***Architecture and Design*** A designer is making a stained-glass window for a new building. The shape of the window can be modeled by the parabola $y = 5 - 0.05x^2$. What is the area of the window?