BC CALCULUS PRACTICE 8.4 **Name:** _____ **Period** _____

Aisle _____

pg. 535; 1, 5, 11, 23, 29, 33, 37
Optional: 19, 25, 32, 41, 44
Show all necessary work neatly.

Evaluate the integrals.

1. $\int \sqrt{4-x^2}\,dx$	**5.** $\int \frac{dx}{(4+x^2)^2}$
11. $\int \frac{dx}{x^2\sqrt{9x^2-4}}$	**23.** $\int_{\sqrt{2}}^{2} \frac{dx}{x^2\sqrt{x^2-1}}$
29. Find the arc length of the curve $y = \ln x$ from $x = 1$ to $x = 2$.	33. $\int \frac{dx}{x^2-4x+5}$

37.

$$\int \frac{dx}{\sqrt{x^2 - 6x + 10}}$$

Optional:

19. $\int e^x \sqrt{1 - e^{2x}}\, dx$

Optional:

25. $\int_1^3 \frac{dx}{x^4\sqrt{x^2 + 3}}$

Optional:

32. Find the volume of the solid generated when the region enclosed by $x = y(1 - y^2)^{1/4}$, $y = 0$, $y = 1$, and $x = 0$ is revolved about the y-axis.

Optional:

41.

$$\int \frac{dx}{2x^2 + 4x + 7}$$

Optional:

44.

$$\int_0^4 \sqrt{x(4 - x)}dx$$