Suppose you want to estimate $\int_{-1}^{3} x^2 dx$ using the LEFT(4) approximation.

(10)   1. Sketch $f(x) = x^2$ on the interval $[-1, 3]$ and the area corresponding to LEFT(4).

(10)   2. Compute LEFT(4) for the integral.

(10)   3. Consider the integral $\int \dfrac{1}{x^2\sqrt{25 - x^2}} dx$.

Choose a trigonometric substitution to solve this, then make the substitution.

You should simplify your answer, but you do not need to finish computing the integral!