7. **Arfken, p. 464, 5th Ed., Prob. 7.2.7 (p. 476, Prob. 7.1.7, 6th Ed.).** It Is Probably Best To first Note That All the possible choices of Integrals Are the Same, Due To the Transformation Properties of $\cos\theta \to -\cos\theta \to \sin\theta \to -\sin\theta$, If the Integral Is Over All Angles $0 \le \theta < 2\pi$. Given This fact, you will need to Do One Representative Integral, Such As $\int_0^{2\pi} \frac{d\theta}{a + b\cos\theta}$, For $a > |b|$. It Is Probably Best To Approach this Integral By Making the Integration Variable Substitution $z = e^{i\theta}, dz = ie^{i\theta}d\theta = izd\theta, d\theta = \frac{dz}{iz}$, Where the Integral In the Complex Plane Is Simply a Closed Loop Contour, C, Of Radius One, $|z| = 1$, About the Origin. In Addition, Replace the Cosine Function With $\cos\theta = \frac{1}{2}\left(e^{i\theta} + e^{-i\theta}\right) = \frac{1}{2}\left(z + \frac{1}{z}\right)$. Given the Equivalent Closed Loop Integral In the Complex Plane, you will need to Use the Residue Theorem In Order To Simply Calculate the Integral, $\oint_C f(z)dz = 2\pi i(\text{sum of residues})$. Recall That the Residue Is the Coefficient, a_0, Of