From Munkres, *Elements of Algebraic Topology*, p. 407:

1. You may assume this fact: if $R \to R'$ is a homomorphism of commutative rings, then for any topological space X, $H^*(X;R) \to H^*(X;R')$ is a ring homomorphism. Use this plus our knowledge of $H^*(\mathbf{R}P^n;\mathbf{F}_2)$ to compute the integral cohomology rings of $\mathbf{R}P^n$ (may depend on the parity of n) and $\mathbf{R}P^\infty$.

2. Let X be a connected triangulable homology 7-manifold. Suppose that

$$H_7(X) \cong \mathbf{Z}, \quad H_6(X) \cong \mathbf{Z},$$
$$H_5(X) \cong \mathbf{Z}/2, \quad H_4(X) \cong \mathbf{Z} \oplus \mathbf{Z}/3.$$

   What can you deduce about the cohomology groups of X and the cohomology ring of X?

3. Let X be a compact orientable, triangulable homology $(4n+2)$-manifold. Show that $H_{2n+1}(X) \ncong \mathbf{Z}$.