Question 2 [8 marks] Recent satellite data indicate that 24% of the world's sandy beaches are eroding. Suppose 30 sandy beaches from around the world are selected at random.

a. **[2 marks]** What is the probability that exactly seven beaches are eroding? Show **all your work** in order to get full marks.

b. **[3 marks]** What is the probability that at least 10 beaches are eroding? Show **all your work** in order to get full marks.

c. **[3 marks]** Suppose at most eight beaches are eroding. What is the probability that at most four beaches are eroding? Show **all your work** in order to get full marks.