SHOW ALL WORK.

1) If the average price of a new home in Santa Clara county is $500,000 with a standard deviation of $60,000, what is the z-score of the following new home prices?

   a) $350,000

   \[
   z = \frac{350,000 - 500,000}{60,000} = \frac{-150,000}{60,000} = -2.5
   \]

   b) $600,000

   \[
   z = \frac{600,000 - 500,000}{60,000} = \frac{100}{60} = 1.67
   \]

   c) Are either of these prices unusual? Explain.

   The z-score of -2.5 is the unusual one with less than 5% getting a score that low.

2) What is the probability of getting 4 or higher with the roll of a single dice?

   \[
   S = \{1, 2, 3, 4, 5, 6\} \Rightarrow P(x \geq 4) = \frac{3}{6} = \frac{1}{2}
   \]