1. List the sample space for
   a) rolling a ten-sided die
   b) the sexes of children in a three-child family

2. Write down an event whose probability is impossible or zero. 

3. If a letter is chosen at random from the word 
   ARCARNACONA
   What is the probability it is a:
   a) a vowel
   b) a vowel or a consonant
   c) an E
   d) an A

4. Draw a tree diagram to show the sample space for a family 
   with four children (assume all single births).

5. Using your tree diagram in Q4 answer the following
   a) Pr(no girls) =
   b) Pr (only 1 boy) =
   c) Pr (exactly 2 boys) =
   d) Pr (at least 1 girl) =
   e) Pr (a girl before any boys) =
   f) Pr (more girls than boys) =

6. In a group of 30 students, 9 play hockey and softball. 14 play only 
   softball and 4 play no sport at all. Using the letter H and S to represent Hockey 
   and Softball, draw a Venn diagram

7. Answer the following questions using the above Venn diagram:
   a) Pr(H) =
   b) n(S) =
   c) n(∅) =
   d) Pr(S ∩ H) =
   e) Pr(S ∪ H) =
   f) Pr(H') =