Probability Review

1. Determine the probability of the following:

a) Rolling a 4 on a single die.

b) Rolling a sum of 6 on a pair of dice.

c) Flipping tails with a coin.

d) Flipping two heads with two coins.

e) Selecting a blue ball from a bag containing a red, a blue, a green, a yellow, a brown and a purple ball.

2. State whether the events are dependent or independent. **Justify your reasoning.**
a) Flipping a coin and rolling a die.

b) Dealing a card to one person and a second card to another person.

c) Rolling two dice.

d) Randomly selecting a date from a calendar. Randomly selecting someone's name from a list.

3. An icosahedron die has 20 faces labelled from 1 to 20. When rolled, what is the probability that the upper face is:

a) 3?

b) 4?

c) 3 or 4?

d) even?

e) a prime number?

f) greater than six?

4. A coin is flipped five times. How many results are possible in which there are
   a) No consecutive flips of heads or tails?

b) at least two consecutive flips of tails?

c) two flips of two consecutive tails?