4:03 | Theoretical Probability

Name: _____ Class: _____

Exercise

1 A coin is tossed. Find the probability of getting:
   a a head
   b a tail

2 Four cards are labelled A, B, C, D. Find the probability of selecting at random:
   a A
   b B or C
   c anything but D
   b A, B, C or D

3 My fruit bowl contains 5 oranges, 4 apples, 1 peach and 5 bananas. If I choose a piece of fruit at random, find the probability that it is:
   a an orange
   b an apple or a banana
   c not a peach nor an orange
   d not an apple

4 A card is drawn at random from a standard pack of 52 playing cards. What is the probability that the card is:
   a a black card?
   b a diamond?
   c an ace?
   d the 7 of hearts?
   e a Jack or a King?
   f a red 4?

5 In my street, 30% of the families have no pets, 25% have 1 pet, 20% have 2 pets, 15% have 3 pets and the rest have more than 3 pets. What is the probability of randomly choosing a family with:
   a no pets?
   b more than 3 pets?
   c exactly 1 pet?
   d 1 or 2 pets?
   e at least 2 pets?
   f more than 2 pets?

6 Two coins are tossed. What is the probability of obtaining:
   a 2 heads?
   b 2 tails?
   c a head and a tail?

7 James, Anna and Tom are to be speakers in a debate. Their positions as first, second and third speaker are chosen by lot.
   a List all the possible outcomes.
   b Find the probability that:
      i James is first
      ii James is first and Anna second
      iii Tom is second
      iv Anna speaks before Tom

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1 a $\frac{1}{2}$ b $\frac{1}{2}$

2 a $\frac{1}{4}$ b $\frac{1}{2}$ c $\frac{3}{4}$ d 1

3 a $\frac{1}{3}$ b $\frac{3}{5}$ c $\frac{3}{5}$ d $\frac{11}{15}$

4 a $\frac{1}{2}$ b $\frac{1}{4}$ c $\frac{1}{13}$ d $\frac{1}{52}$ e $\frac{2}{13}$ f $\frac{1}{26}$

5 a 0.3 b 0.1 c 0.25 d 0.45 e 0.45 f 0.25

6 a $\frac{1}{4}$ b $\frac{1}{4}$ c $\frac{1}{2}$

7 a JAT, JTA, AJT, ATJ, TJA, TAJ   b i $\frac{1}{3}$ ii $\frac{1}{6}$ iii $\frac{1}{3}$ iv $\frac{1}{2}$