On a national exam, 12% scored 90 or higher. 63% scored at least 70, but less than 90. The rest scored less than 70. Of the people that scored 90 or better, 57% were male. Of the people who scored at least 70, but less than 90, 44% were male, and of the rest, 49% were male.

1) Find the probability that a random test taker was a female.
   A) 1.5000 B) .4681 C) .5000 D) .5319 E) None of these

2) Find the probability that a male scored less than 70.
   A) .1225 B) .7383 C) .2617 D) 1.3456 E) None of these

3) Find the probability a randomly selected person scored 70 or more, given they were female.
   A) .6633 B) .7603 C) .2397 D) .4044 E) None of these

25% of cats in the neighborhood are male. 28% of the male cats are striped. 41% of the female cats are striped.

Find the following probabilities, round to four decimal places if necessary.

4) Find the probability that a randomly selected cat is striped.
   A) .3775 B) .6900 C) .6225 D) .3450 E) None of these

5) Find the probability that a randomly selected cat is female, given that it is striped.
   A) .8146 B) 1.07 C) .4100 D) .3075 E) None of these

6) Find the probability that a randomly selected cat is male, given that it is not striped.
   A) .1800 B) .7200 C) .2892 D) .3187 E) None of these

If an 8-sided fair die is rolled 13 times, then find the following; (Round to four decimal places if necessary.)
(assume the sides are labeled 1 through 8)

7) How many times should we expect to see a “five”.
   A) .3846 B) .6154 C) 2.6000 D) 2.0000 E) None of these

8) Find the probability that exactly 4 of the rolls result in a “three” or less.
   A) .2097 B) .2058 C) .0525 D) .0004 E) None of these

9) Find the probability that we see less than 2 “sixes”.
   A) .7841 B) .3273 C) .4965 D) .5035 E) None of these

Playing a card game, Billy Bob must pick the ace of spades from a deck with 52 cards. The dealer knows where the ace of spades is. The dealer lays all 52 cards in a row. Originally, Billy picks the 15th card. The Dealer then flips all cards over except for the 15th card and the 47th card.

10) Find the probability that he picks the ace of spades on his original guess.
    A) $\frac{1}{52}$ B) $\frac{1}{13}$ C) $\frac{1}{4}$ D) 52 E) None of these

11) After the dealer flips all but the two cards over, if he stays with the 15th card, find the probability that he picks the ace of spades.
    A) $\frac{1}{2}$ B) $\frac{1}{4}$ C) $\frac{1}{13}$ D) $\frac{1}{52}$ E) None of these

12) After the dealer flips all but the two cards over, if he switches to the 47th card, find the probability that he picks the ace of spades.
    A) $\frac{2}{3}$ B) $\frac{51}{52}$ C) $\frac{1}{52}$ D) $\frac{1}{2}$ E) None of these

(Bonus) A class has 10 students in it. 5 different quizzes are to be handed out. Each quiz will be given to a pair of students. How many different ways can this be done?