1. The two largest predictors of juvenile delinquency are a negative parenting style and a negative peer group association. If 35% of children have parents who use a negative parenting style, 16% of children have a negative peer group association, and 8% of children experience both a negative parenting style and a negative peer group association, what percent of children experience a negative parenting style or a negative peer group association?

    (1) 59%   (3) 43%   (2) 51%   (4) 27%

2. The following table shows the results of a survey of people in terms of what type of breakfast they prefer. Based on the table, what is the probability that a person picked at random is over 40 and eats eggs for breakfast?

	Eats Cereal	Eats Eggs
40 and under	23	17
Over 40	21	29

    (1) 0.32   (3) 0.63

    (2) 0.47   (4) 0.82

3. Of all the tourists who visit Florida, 38% of them will visit an amusement park and 54% will visit a beach. If 22% will visit both an amusement park and a beach, then what percent will visit either a park or a beach?

    (1) 16%   (2) 70%   (3) 30%   (4) 92%

4. In a survey of 52 students it was found that 30 study Spanish and 15 have computers. Seven of the students who study Spanish also have computers.

(a) Complete this table based on the information above.

	Study Spanish	Do not study Spanish	Total
Have computers			
Do not have computers			
Total			52

(b) A student is selected at random to attend a computer workshop given in Spanish. What is the probability that the student has a computer and studies Spanish?

5. Events A and B have probabilities P(A) = 0.4, P (B) = 0.65, and P(A ∪ B) = 0.85.

(a) Calculate P(A ∩ B).

(b) State with a reason whether events A and B are independent.

6. A survey of 400 people is carried out by a market research organization in two different cities, Buenos Aires and Montevideo. The people are asked which brand of cereal they prefer out of Chocos, Zucos or Fruti. The table below summarizes their responses. One person is chosen at random from those surveyed. Find the probability that this person:

	Chocos	Zucos	Fruti	Total
Buenos Aires	43	85	62	190
Montevideo	57	35	118	210
Total	100	120	180	400

(i) prefers Fruti or lives in Buenos Aires

(ii) does not prefer Zucos

(iii) prefers Chocos, given that they live in Montevideo.

7. A survey about television-viewing preferences was given to randomly selected freshmen and seniors at Fairport High School. The results are shown in the table below.

Favorite Type of Program			
	Sports	Reality Show	Comedy Series
Senior	83	110	67
Freshmen	119	103	54

(a) A student response is selected at random from the results. State the exact probability the student response is from a freshman, given the student prefers to watch reality shows on television.

(b) Are the events "the student is a freshman" and "the student's favorite type of program is reality shows" independent of each other? Explain your answer

8. According to recent reports in 2010, 74.7% of students graduate from high school. 62.5% of students go directly to college given they had graduated from high school. Based on these statistics, what percent of the total high school population goes directly to college? Round your answer to the nearest tenth of a percent.