1

Find the number of trailing zeros in the expansion of (20!*21!*22! ..... *33!)^3!.

A. 468
B. 469
C. 470
D. 467
E. 471

2

The rate of a certain chemical reaction is directly proportional to the square of the concentration of chemical A present and inversely proportional to the concentration of chemical B present. If the concentration of chemical B is increased by 100 percent, which of the following is closest to the percent change in the concentration of chemical A required to keep the reaction rate unchanged?

A. 100% decrease
B. 50% decrease
C. 40% decrease
D. 40% increase
E. 50% increase

3

An empty fuel tank with a capacity of 200 gallons was filled partially with fuel A and then to capacity with fuel B. Fuel A contains 12% ethanol by volume and fuel B contains 16% ethanol by volume. If the full fuel tank contains 30 gallons of ethanol, how many gallons of fuel A were added?

A 160
B 150
C 100
D 80
E 50