Questions 28-30 are based on the following:

Use the following information to answer the remaining questions in the midterm exam.

A large service depot has a clientele of large companies with extensive computer equipment. The average number of service calls they receive every day over an 8-hour period is 3. They employ three highly trained technicians and other supporting staff. Each service call requires one technician for the entirety of the day on which they are called.

Q28. What is the probability that on a given day, there will be exactly 4 service calls?

a) 0.3333
b) 0.2240
c) 0.1680
d) 0.3528
e) 0.6472

Q29. What is the probability that there will be more than three calls in one day so that the three technicians will not be sufficient?

a) 0.9730
b) 0.7760
c) 0.0270
d) 0.3528
e) 0.2240

Q30. One day, there were no service calls in the morning and one technician was allowed to take the afternoon off. In the remaining four hours of the afternoon, what is the probability that there will be more than two service calls in the afternoon so that the service depot will not be able to meet the full service needs with only two technicians?

a) 0.1912
b) 0.2510
c) 0.7490
d) 0.8088
e) 0.5768