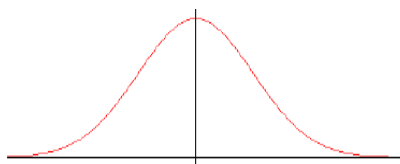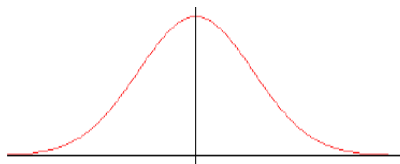Name:

QUIZ 19 – MATH GRADE 12

1. (100%) The masses of a population in a certain town are normally distributed with a mean of 75 kg and a standard deviation of 10 kg. Use the diagram to show work.
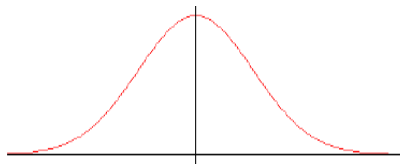
   a. (15%) Calculate the probability that a person selected at random will have a mass of 75 kg or more.
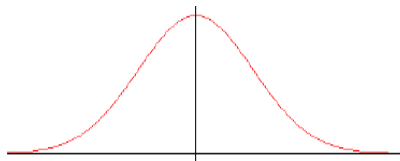
   b. (15%) Calculate the probability that a person selected at random will have a mass of 82 kg or more.
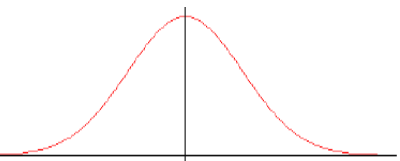
   c. (15%) Calculate the probability that a person selected at random will have a mass of 67 kg or less.

   d. (15%) Calculate the probability that a person selected at random will have a mass between 59 and 77 kg.

   e. (20%) The probability that the mass of a person is less than a is 0.64, Find the value of a.

   f. (20%) The probability that the mass of a person lies between $-a$ and a is 0.9, Find the value of a.