Pencil and Paper Exercises on Sampling Statistics

In one experiment on reading ability two techniques are compared, A
and B. The variable to be predicted is the reading score known as
'Degree of Reading Power'(DRP). The researcher used method A in a
group of 25 pupils and method B in a second group of 16 pupils.
Pupils were randomly assigned to one or the other group. Assume that
the population of all children of the relevant age follows a N(34,10)
distribution in the case of method A, and a N(37,12) distribution in
the case of method B.

  (a) What is distribution of the average DRP scores for method A in
      groups of 25 pupils? Assume that these group may be viewed
      as randomly selected samples.
  (b) What is the distribution of average scores for method B in
      groups of 16 pupils.

ad (a) means of n-size samples are distributed $N(\mu, \sigma/\sqrt{n})$

samples of size 25 have mean $= \mu = 34$, SE $= 10/\sqrt{25} = 10/5 = 2$

ad (b) means of n-size samples are distributed $N(\mu, \sigma/\sqrt{n})$

samples of size 16 have mean $= \mu = 37$, SE $= 12/\sqrt{16} = 12/4 = 3$