

Show work and circle all final answers (all should be areas rounded to 4 decimal places).

- 1.) The scores on a college placement test are normally distributed with mean 500 and standard deviation 65.
 - a.) What percentage of people taking this exam will have scores higher than 390?

 - b.) What percentage of the people taking this test will have scores between 450 and 485?

 - c.) What percentage of the people taking this test will have scores between 425 and 530?

- 2.) The diameter of nails produced in a factory are normally distributed with a mean of 0.30 inches and a standard deviation of 0.01. What percentage of nails will have a diameter greater than 0.32 inches?

- 3.) The amount of tip the waiters in an exclusive restaurant receive per shift is normally distributed with a mean of \$70 and a standard deviation of \$8. A waiter feels he has provided poor service if his total tip for the shift is less than \$55. Based on his theory, what is the probability that he has provided poor service?