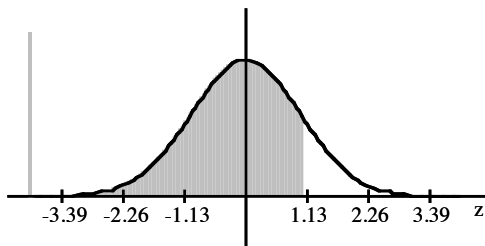


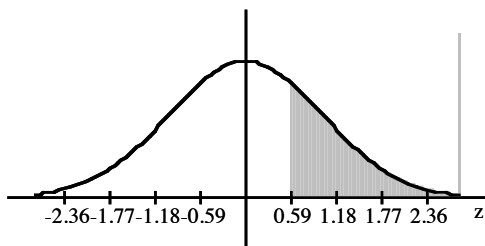
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Find the area of the shaded region. The graph depicts the standard normal distribution with mean 0 and standard deviation 1.

1)



2)

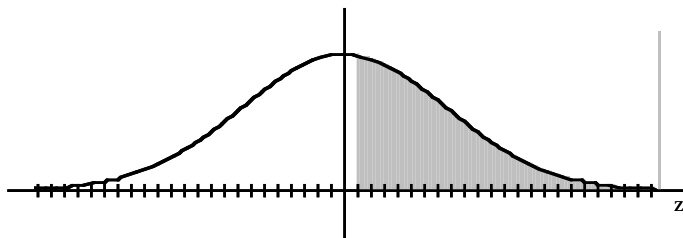


If z is a standard normal variable, find the probability.

3) The probability that z lies between -1.10 and -0.36

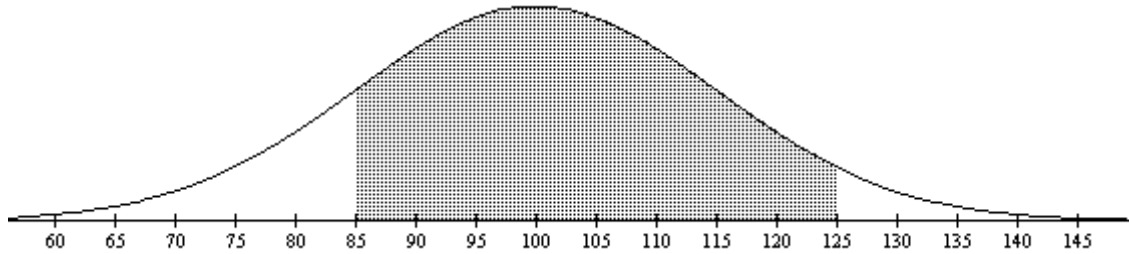
Find the indicated z score. The graph depicts the standard normal distribution with mean 0 and standard deviation 1.

4) Shaded area is 0.4483.

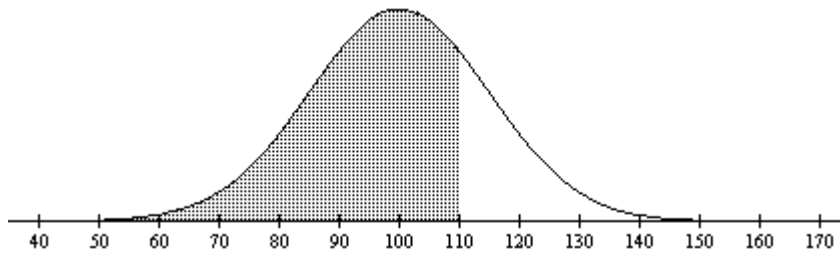


Provide an appropriate response.

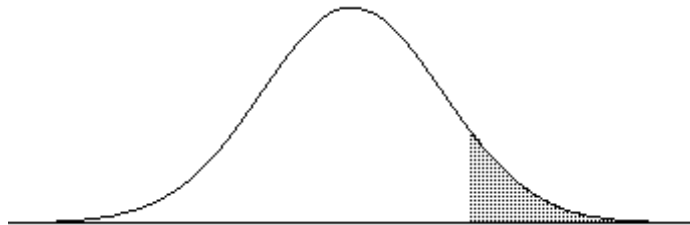
- 5) Find the area of the shaded region. The graph depicts IQ scores of adults, and those scores are normally distributed with a mean of 100 and a standard deviation of 15 (as on the Wechsler test).



- 6) Find the area of the shaded region. The graph depicts IQ scores of adults, and those scores are normally distributed with a mean of 100 and a standard deviation of 15 (as on the Wechsler test).



- 7) Find the indicated IQ score. The graph depicts IQ scores of adults, and those scores are normally distributed with a mean of 100 and a standard deviation of 15 (as on the Wechsler test).



The shaded area under the curve is 0.10.

Solve the problem. Round to the nearest tenth unless indicated otherwise.

- 8) Scores on a test are normally distributed with a mean of 63.2 and a standard deviation of 11.7. Find P_{81} , which separates the bottom 81% from the top 19%.

Find the indicated probability.

- 9) The lengths of human pregnancies are normally distributed with a mean of 268 days and a standard deviation of 15 days. What is the probability that a pregnancy lasts at least 300 days?

A final exam in Math 160 has a mean of 73 with standard deviation 7.8. If 24 students are randomly selected, find the probability that the mean of their test scores is less than 70.

The scores on a certain test are normally distributed with a mean score of 60 and a standard deviation of 5. What is the probability that a sample of 90 students will have a mean score of at least 60.527?

The given values are discrete. Use the continuity correction and describe the region of the normal distribution that corresponds to the indicated probability.

The probability of more than 44 correct answers

For the binomial distribution with the given values for n and p , state whether or not it is suitable to use the normal distribution as an approximation.

$n = 16$ and $p = 0.2$

$n = 62$ and $p = 0.7$

Estimate the indicated probability by using the normal distribution as an approximation to the binomial distribution.

7. A certain question on a test is answered correctly by 22% of the respondents. Estimate the probability that among the next 150 responses there will be at most 40 correct answers.

Find the indicated critical z value.

◁ Find the critical value $z_{\alpha/2}$ that corresponds to a 91% confidence level.

Express the confidence interval using the indicated format.

⊗ Express the confidence interval (0.432, 0.52) in the form of $\hat{p} \pm E$.

Solve the problem.

The following confidence interval is obtained for a population proportion, p : $0.753 < p < 0.797$. Use these confidence interval limits to find the point estimate, \hat{p} .