

Online Homework Package Created by : Elsit and Satya Mandal		
Course Id :Math 105	Topics in Mathematics	Semester : Summer2017
Instructor :Satya Mandal Line No : 84895		
Homework No: 13	Total Points :50	Due Date:(YYYY-MM-DD) 2017-07-27

Question-1	<p>It is known that the annual salary X in a corporation is normally distributed with mean $\mu = \\$35,000$ and standard deviation $\sigma = \\$11,000$.</p> <p>The annual salary of an engineer is \$76,000 and the annual salary of a secretary is \$21,000. How many standard deviations apart are the annual salary of the the engineer and the the secretary?</p>
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Answer Question-1	<div style="border: 1px solid black; padding: 2px;"> <p style="background-color: #008080; color: white; margin: 0;">This is a Numerical-Answer Type Question</p> <p style="margin: 0;">Number of stand. dev. is <input style="width: 100px;" type="text"/></p> </div>
Points	5.00

Question-2	Refer to Question 1. The annual salary of a manager is \$87,000. How many standard deviations apart are the incomes of the enginner and the manager?
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Answer Question-2	<div style="border: 1px solid black; padding: 2px;"> <p style="background-color: #008080; color: white; margin: 0;">This is a Numerical-Answer Type Question</p> <p style="margin: 0;">Number of stand. dev. is <input style="width: 100px;" type="text"/></p> </div>
Points	5.00

Question-3	Refer to Question 1. How many standard deviations apart are the income of the secretary and the manager?
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Answer Question-3	<div style="border: 1px solid black; padding: 2px;"> <p style="background-color: #008080; color: white; margin: 0;">This is a Numerical-Answer Type Question</p> <p style="margin: 0;">Number of stand. dev. is <input style="width: 100px;" type="text"/></p> </div>
Points	5.00

Question-4	<p>The weight X at birth of babies have normal distribution with mean $\mu = 115$ ounces and standard deviation $\sigma = 17$ ounces.</p> <p>Also suppose that two babies were born on the same day. One weighs 128 ounces and the other weighs 94 ounces. How many standard deviations apart is the first baby from the second baby?</p>
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Answer Question-4	This is a Numerical-Answer Type Question Number of stand. deviations is
Points	5.00

Question-5	Refer to Question 4. On the same day, a pair of twins were born. The first baby weighed 136 ounces and the second weighed 119 ounces. How many standard deviations apart is the second from the first?
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Answer Question-5	This is a Numerical-Answer Type Question Number of stand. deviations is
Points	5.00

Question-6	Refer to Question 4. Later on the same day, a boy and a girl, were born. The boy weighed 138 ounces and the girl weighed 112.5 ounces. How many standard deviations apart is the boy from the girl?
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Answer Question-6	This is a Numerical-Answer Type Question Number of stand. deviations is
Points	5.00

Question-7	The height X at birth of babies have normal distribution with mean $\mu = 18$ inches and standard deviation $\sigma = 4$ inches. Suppose two babies were born on the same day. Say one was 22 inches long and the other was 14 inches long. How many standard deviations apart is the first baby from the second baby?
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Answer Question-7	This is a Numerical-Answer Type Question Number of stand. deviations is
Points	5.00

Question-8	Refer to Question 7. Say another baby was born and was 18 inches long. How many standard deviations apart is this baby from the 22-inch baby?
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Answer Question-8	This is a Numerical-Answer Type Question Number of stand. deviations is
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Points	5.00
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Question-9	The waiting time X for the bus is normally distributed with mean $\mu = 300$ seconds and standard deviation $\sigma = 75$ seconds. You had to wait 420 seconds on Monday and 290 seconds on Tuesday. How many standard deviations apart are the waiting time on these two days?
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Answer Question-9	This is a Numerical-Answer Type Question Number of stand. deviations is
Points	5.00

Question-10	Refer to Question 9. On Wednesday, you had to wait 370 seconds and your friend had to wait 510 seconds. How many standard deviations apart are the waiting time on these two days?
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Answer Question-10	This is a Numerical-Answer Type Question Number of stand. deviations is
Points	5.00

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