**MAT150 Statistics Assignment #13**

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1. Suppose we know that the birth weight of babies is normally distributed with mean 3500g and standard deviation 500g.
2. What is the probability that a baby is born that weighs less than 3100g?
3. Find the z-score, and construct the standard normal distribution density curve, then shade your seeking area.
4. Find the probability.
5. If 25 new born babies are randomly selected, what is the probability that the 25 babies are born that their mean weigh less than 3100g?
6. Find the z-score, and construct the standard normal distribution density curve, then shade your seeking area.
7. Find the probability.
8. The life of a certain type of engine is normally distributed with a mean of 10 years, and a standard deviation of 1.5 years.
9. If one engine is randomly selected, what is the probability that the life of this engine is between 8 and 13 years?
10. Find the z-score, and construct the standard normal distribution density curve, then shade your seeking area.
11. Find the probability.
12. If 20 engines are randomly selected, what is the probability that the mean life of these 20 engines is between 8 and 13 years?
13. Find the z-score, and construct the standard normal distribution density curve, then shade your seeking area.
14. Find the probability.
15. A company pays its employees an average hourly wage of $36.25 with a standard deviation of $6.50. If 36 employees are randomly selected, what is the probability that their mean wage is more than $23.22?