

NORMAL RV HOMEWORK

TEXT: 5.1, 5.2, 6.1 6.2

LAST NAME	FIRST NAME	DATE
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The average wingspan among Great Albatrosses is about 10 feet, with standard deviation about 1.5 feet, and the distribution is approximately normal.

1. Find the proportion of albatrosses with wingspan greater than 12 feet.
2. Find the proportion of albatrosses with wingspan between 8 and 9 feet.
3. Find the 80th percentile of the wingspan.
4. Kehaar is a particularly large albatross: only 1% of all albatrosses in this population have larger wingspan. Find Kehaar's wingspan.
5. Find the wingspan with z -score of -5 .
6. Find the proportion of albatrosses with wingspan at or below the z -score of -5 .

Let $X \sim N(\mu = -6, \sigma = 2)$

7. Find $P(X \leq -5)$

8. Find $P(X = -6)$

9. Find $P(X > 0)$

10. Find $P(-3 \leq X \leq 2)$

11. Find the first quartile of X .

12. Find the number x such that 45% of values of X are greater than x .

13. Find numbers that bound the middle 90% of the area under the graph of pdf of X .

14. Find numbers that bound the middle 99.9% of the area under the graph of pdf of X .

ANSWERS

1. 0.09121122
3. 11.26243 feet
5. 2.5
7. 0.6914625
9. 0.001349898
11. -7.34898
13. -9.289707 and -2.710293