



## Puzzle Time

### What is Moby Dick’s Favorite Dinner?

Write the letter of each answer in the box containing the exercise number.

A normal distribution has mean  $\mu$  and standard deviation  $\sigma$ . Find the indicated probability for a randomly selected  $x$ -value from the distribution.

1.  $P(x \geq \mu + \sigma)$
2.  $P(x \geq \mu - 2\sigma)$
3.  $P(x \leq \mu - 2\sigma)$
4.  $P(\mu - 2\sigma \leq x \leq \mu + 2\sigma)$
5.  $P(x \leq \mu + 3\sigma)$

A normal distribution has a mean of 24 and a standard deviation of 3. Find the probability that a randomly selected  $x$ -value from the distribution is in the given interval.

6. between 18 and 27
7. between 21 and 33
8. between 24 and 33
9. at most 27
10. at most 15
11. not greater than 24
12. between 18 and 33

#### Answers

- S. 2.5%
- A. 99.85%
- F. 16%
- H. 95%
- S. 97.35%
- N. 81.5%
- S. 49.85%
- I. 97.5%
- I. 0.15%
- H. 84%
- D. 83.85%
- P. 50%

1	2	3	4		5	6	7		8	9	10	11	12
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## Puzzle Time

### Where Do You Find Canada?

Write the letter of each answer in the box containing the exercise number.

**Determine whether the data are collected from a population or a sample.**

1. a survey of 400 high school sophomores at a school with 842 sophomores
2. the number of people 65 or older in the United States

**Identify the population and sample.**

3. In the United States, a survey of 5000 high school seniors found that 3284 of them plan on attending a 4-year university following graduation.
4. In the United States, a survey of 2500 homeowners with a monthly mortgage payment found that 1280 of them have refinanced their mortgage within the last five years.
5. In a school district, a survey of 1000 middle school students found that 894 of them participate in an extracurricular activity.
6. A survey of 5000 elementary students found that 1974 of them have cell phones.

**Answers**

- P.** Population: All elementary students; Sample: 5000 elementary students in the survey
- M.** Population: All homeowners with mortgage payments in the United States; Sample: 2500 homeowners in the survey
- O.** sample
- A.** Population: All high school seniors in the United States; Sample: 5000 high school seniors in the survey
- N.** population
- A.** population: All middle school students in the school district; Sample: 1000 middle school students in the survey

1	2		3		4	5	6
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