Name _____ Date _____

## 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 randomy 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   |   |   |   |    |    |    |