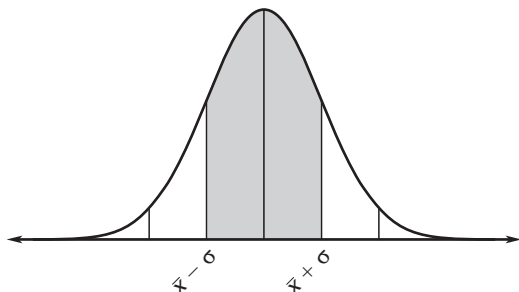NAME _____ DATE _____

Practice A

For use with pages 746–752

Give the percent of the area under a normal curve represented by the shaded region.
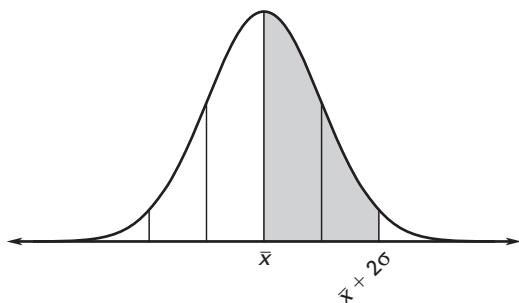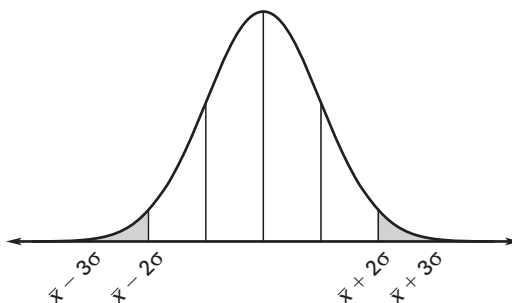
1.

2.
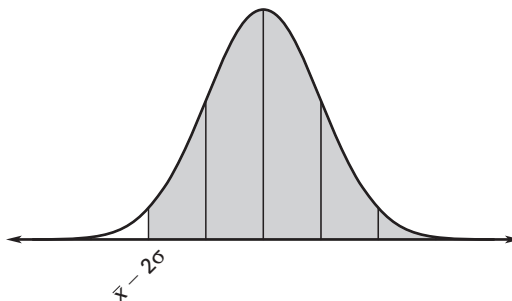
3.

4.

A normal distribution has a mean of 56 and a standard deviation of 8. Find the probability that a randomly selected *x*-value is in the given interval.

5. between 40 and 64   **6.** between 32 and 40   **7.** between 56 and 64

8. at most 56   **9.** at least 72   **10.** at most 64

A normal distribution has a mean of 100 and a standard deviation of 16. Find the given probability.

11. three randomly selected *x*-values are all 84 or greater

12. two randomly selected *x*-values are both 132 or less

Find the mean and standard deviation of a normal distribution that approximates a binomial distribution consisting of *n* trials with probability *p* of success on each trial.

13. $n = 20, p = 0.8$ **14.** $n = 35, p = 0.3$ **15.** $n = 42, p = 0.2$

Photography   **In Exercises 16 and 17, use the following information.**

The developing times of photographic prints are normally distributed with a mean of 15.4 seconds and a standard deviation of 0.48 second.

16. What is the probability that the developing time of a print will be at least 16.36 seconds?

17. What is the probability that the developing time of a print will be between 13.96 seconds and 15.88 seconds?

NAME _____ DATE _____

Practice B

For use with pages 716–722

Choosing Numbers   You have an equally likely chance of choosing any integer from the set {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12}. Find the probability of the given event.

1. An even number is chosen.

2. A prime number is chosen.

3. A multiple of 3 is chosen.

4. A two-digit number is chosen.

Farm Animals   Your cousin lives on a small farm. She is a member of the 4-H Club and is showing nine animals at the county fair. Two of her animals won a blue ribbon (1st place), one won a red ribbon (2nd place), and three won white ribbons (3rd place). You do not know which animals won which prizes. You choose one of your cousin's animals at random.

5. What is the probability that the animal won a 1st place ribbon?

6. What is the probability that the animal won a ribbon?

7. What is the probability that the animal won a red or white ribbon?

Live Births   In Exercises 8–10, use the following information.

Of all live births in the United States in 1996, 12.9% of the mothers were teenagers, 51.8% were in their twenties, 33.4% were in their thirties, and the rest were in their forties. Suppose a mother is chosen at random.

8. What is the probability that the mother gave birth in her twenties?

9. What is the probability that the mother gave birth in her twenties or thirties?

10. What is the probability that the mother gave birth in her forties?

11. *Choosing Coins*   You have 8 pennies in your pocket dated 1972, 1978, 1979, 1985, 1989, 1991, 1993, and 1999. You take the coins out of your pocket one at a time. What is the probability that they are taken out in order by date?

12. *Geometry*   Find the probability that a dart thrown at the given target will hit the shaded region. Assume the dart is equally likely to hit any point inside the target.

Lesson 12.3