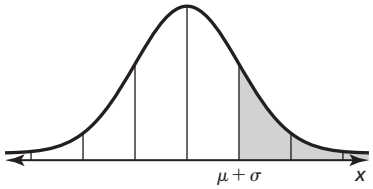
Name_____ Date _____

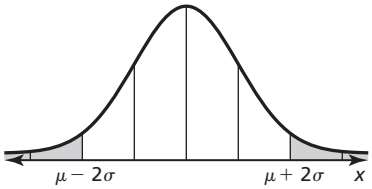
10.1 Practice B

In Exercises 1 and 2, give the percent of the area under the normal curve represented by the shaded region.

1.



2.



In Exercises 3–5, a normal distribution has mean μ and standard deviation σ. Find the indicated probability for a randomly selected *x*-value from the distribution.

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

In Exercises 6–8, a normal distribution has a mean of 28 and a standard deviation of 3. Find the probability that a randomly selected *x*-value from the distribution is in the given interval.

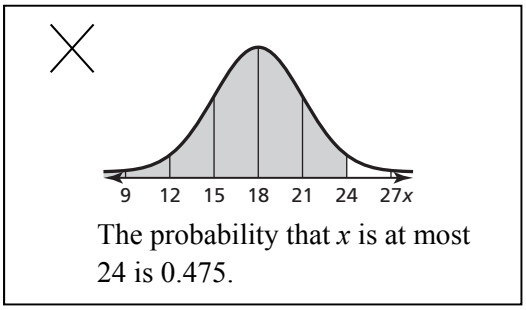
6. between 19 and 34 **7.** at most 31 **8.** at least 34

9. The times a restaurant takes to prepare its "quick lunch" specials are normally distributed with a mean of 3 minutes and a standard deviation of 0.5 minute.

a. About what percent of customers have their "quick lunch" between 2 minutes and 4 minutes?

b. About what percent of customers have their "quick lunch" in fewer than 2 minutes?

10. A normal distribution has a mean of 18 and a standard deviation of 3. Describe and correct the error in finding the probability that a randomly selected *x*-value is in the given interval.



The probability that x is at most 24 is 0.475.