3rd Down The graphs show 3rd down statistics for all of the regular season NFL games from 2000 through 2007. Plays within 2 minutes of the end of a half and all plays within field goal range are excluded. In Exercises 7–14, use the graphs. (See Examples 3 and 4.)

- Do NFL coaches call more pass plays or run plays on 3rd down? Explain your reasoning.
- **8.** Describe the pattern in the "3rd Down Success" graph.
- **9.** For what "to go" distances are the conversion rates for running and for passing about equal on 3rd down?
- **10.** With 2 yards to go on 3rd down, should the defense expect a pass play or a run play? Explain your reasoning.
- **11.** With 2 yards to go on 3rd down, should the coach call a pass play or a run play? Explain your reasoning.
- **12.** How might a quarterback's passing efficiency influence a coach's play selection on 3rd down and 4 yards to go?
- 13. The optimum mix for running and passing occurs when the conversion rates are about equal. When this happens, the overall conversion rate will be greatest. Is the pass/run ratio at an optimum mix on 3rd down and 1 yard to go? Explain your reasoning.
- 14. Suppose you are the coach of an NFL team. Your team is facing a 3rd down with 5 yards to go. Would you call a pass play or a run play? Explain your reasoning.

