Chapter 11
Intelligence

Review 11.1: What Is Intelligence?
Retief and Ron are university friends and are discussing their future plans. Ron says, “I have an IQ of 120.” Retief points out that Ron is (1) reifying the concept of intelligence and should instead say, “My score on an intelligence test was 120.” Retief, who’s been studying intelligence in his psychology textbook, continues by noting that he agrees with historical researcher Charles (2) Spearman, who suggested that there is a (3) general intelligence, or g, factor that underlies various clusters of abilities. Knowing that Ron is a World Checkers Champion, Retief isn’t sure that Ron’s verbal intelligence would show up in a cluster with his truly amazing spatial abilities if (4) factor analysis were used on the results of his intelligence test. Retief, on the other hand, who is a wonderful piano keyboarder, agrees with psychologist Robert (5) Sternberg, who has suggested that there are three intelligences and that Retief’s ability to produce unique sound combinations reflects his (6) creative intelligence, while his friend Ron’s spatial abilities would be considered (7) analytical intelligence. Their friend Sho, who also achieves a high IQ score, has decided to become a psychotherapist. Sho has very high (8) emotional intelligence, which enables him to perceive, (9) understand, (10) manage, and use emotions.

Review 11.2: History of Intelligence Testing
In 1904, the French minister of public education wanted to find an objective way of identifying children with special needs. He asked Alfred (1) Binet to study the problem. Assuming that all children follow (2) the same course of intellectual development, he and Theodore (3) Simon devised the first intelligence test to assess learning potential. They measured the child’s (4) mental age, defined as the (5) chronological age typical of a given level of performance. Years later, Lewis (6) Terman found that this test did not work well with California students and so revised it to create the (7) Stanford-Binet test, which formed the basis for William (8) Stern’s intelligence quotient (IQ) formula: (9) mental age divided by (10) chronological age, and multiply the result by 100. Using this formula, the average score is (11) 100. Because the original IQ formula worked fairly well for (12) children but not for (13) adults, today’s intelligence tests instead produce a mental ability score based on the test-taker’s performance relative to the average performance of others the same (14) age.

Review 11.3: Assessing intelligence
Eighteen-year-old Sooji is designing an intelligence test that will predict how well her peers will fare as they go on to higher education by assessing their (1) aptitude for advanced learning. After creating the questions, Sooji must make sure the test meets the criteria of a good psychological test. First, she administers the test to a (2) representative sample of students, creating a pretested group against which test-takers’ scores can be compared in order to (3) standardize the test. Next, she must be sure that the test yields consistent results, perhaps by comparing answers to odd and even questions—that it is (4) reliable. Finally, she must be sure the test measures and predicts what it is supposed to—that it is (5) valid. If the test measures students’ academic potential, then it has (6) content validity because it is indeed measuring the behavior of interest. And if the test scores later correlate with the behavior they were attempting to predict, known as the (7) criterion, then the test has (8) predictive validity. If Sooji’s test meets all the criteria of a good psychological test, as David (9) Wechsler’s intelligence scale does, the scores of any group of people who take it should form a bell-shaped pattern called a (10) normal curve, with an average score of (11) 100. To keep that average score, Sooji must periodically (12) re-standardize the test. And, if Sooji had first developed and administered her test 30 years ago, then compared the scores with the scores of today’s students, she’d find that they had increased, which is called the (13) Flynn effect.