

## Practice Skills

### A Review for Proofs: Writing

Write the following in either words or symbols.

1. **Let  $n$  be an even integer.** Prove that  $n^2 + 2n - 15$  is an even integer. (Write out the proof in words and then check that the symbols represent it correctly.)
2. **Let  $n$  be an integer.** Prove that  $n^2 + 2n + 1$  is an even integer if and only if  $n$  is an even integer.
3. **Let  $n$  be an integer.** Prove that  $n^2 + 2n + 1$  is an even integer if and only if  $n$  is an odd integer.
4. **Let  $n$  be an integer.** Prove that  $n^2 + 2n + 1$  is an even integer if and only if  $n$  is an even integer or  $n$  is an odd integer.
5. **Let  $n$  be an integer.** Prove that  $n^2 + 2n + 1$  is an even integer if and only if  $n$  is an even integer or  $n$  is an odd integer.
6. **Let  $n$  be an integer.** Prove that  $n^2 + 2n + 1$  is an even integer if and only if  $n$  is an even integer or  $n$  is an odd integer.

Write a sentence or two for each problem. Use words and symbols as needed.

1.  $n^2 + 2n + 1$  is an even integer.
2.  $n^2 + 2n + 1$  is an even integer.

Write the sets in roster notation. Use the appropriate symbols.

1.  $\{ \triangle, \square, \circ, \triangle \}$
2.  $\{ \triangle, \square, \circ, \triangle \}$