

Program 1.30 has only two decisions— $(d > 0)$ and $(d == 0)$. The statements in the `// two real roots` block are executed only when the first decision is true; those in the block `// both roots are the same` are executed only when the first decision is false and the second true; and those in the block `// complex conjugate roots` are executed only when both decisions are false. Therefore, any data set that causes all statements to be executed must cause each decision to take on both the truth values true and false. Hence, statement coverage implies decision coverage.

Program 1.20 has three execution paths. Each of these paths contains at least one statement that is not on any other path. So statement coverage must result in execution path coverage.