YOU CANNOT USE THIS ON ANY TEST

Construct	Code Segment
End of statement	Colons (:) are used to start a new statement
Operators	! (not) , ^ or ↑(exponent), * (multiplication), / (real division), % (modulus), +, -, >, <, >=, <=, !=, ==, && (and), || (or) in that order of precedence
Functions	abs(x) - absolute value, sqrt(x) - square root, int(x) - greatest integer <= x
Variables	Start with a letter, only letters and digits
Sequential statements	INPUT variable variable = expression (assignment) OUTPUT variable

Decision statements	IF boolean expression THEN
	Statement(s)
	ELSE (optional)
	Statement(s)
	END IF

Indefinite Loop statements	WHILE Boolean expression Statement(s) END WHILE

Construct	Code Segment
Definite Loop statements	FOR variable = start TO end STEP increment Statement(s) NEXT (Assume default increment is 1)
Arrays	1 dimensional arrays use a single subscript such as A(5). 2 dimensional arrays use (row, col) order such as A(2,3). Arrays can start at location 0 for 1 dimensional arrays and location (0,0) for 2 dimensional arrays. Most ACSL past problems start with either A(1) or A(1,1). The size of the array will usually be specified in the problem statement.
Strings	Strings can contain 0 or more characters and the indexed position starts with 0 at the first character. An empty string has a length of 0. Errors occur if accessing a character that is in a negative position or equal to the length of the string or larger. The len(A) function will find the length of the string which is the total number of characters. Strings are identified with surrounding double quotes. Use [ ] for identifying the characters in a substring of a given string as follows: S = “ACSL WDTPD” (S has a length of 10 and D is at location 9) S[:3] = “ACS” (take the first 3 characters starting on the left) S[4:] = “DTPD” (take the last 4 characters starting on the right) S[2:6] = “SL WD” (take the characters starting at location 2 and ending at location 6) S[0] = “A” (position 0 only). String concatenation is accomplished using the + symbol