

Assignment 1

1. Write a program that prints
2 to the power of 20 is xxx
where xxx is replaced by the value of 2^{20} .
2. Use appropriate loops for programs that calculate the following sums:
 - a) $1 + .5 + .25 + \dots$
 - b) $1 + .5 + .25 + \dots + xxx$, where $xxx > 10^{-3}$.
 - c) $55 + 56 + \dots + 100$
3. Read an integer variable *i* and a real variable *x* from the console repeatedly . Depending on the value of the integer variable, print the following:

<u>integer</u>	<u>action</u>
1	logarithm of x
2	sine of x
3	square of x
“else”	“quit the program”

Use the DO loop without arguments and the CASE statement.

Note: To read variables *x* and *y* from the keyboard, type
read*,*x,y*

4. Print the following numbers:
 $1.0/3^{**0}$
 $1.0/3^{**2}$
...
 $1.0/3^{**10}$

in F, E and G formats using specifications 10.3 and 12.6.

5. Create a file with a pedigree line that contains animal ID, sire ID, dam ID and year of birth:
HOL234HOL001HOL9831998
Write a program that will read the IDs and year of birth into separate variables.

6. Browse through a list of Fortran functions in your manual. By writing simple programs, determine differences between int, nint, floor and ceiling.

Optional

Write a program that

- reads an alphanumeric variable of length up to 10,
- for each character of that variable, writes a numeric equivalent of that character.

The numeric equivalent of character *c* is `ichar(c)`.