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10 (Program to show how to 'get your hands dirty'!
20  i.e. how to modify Pascal variables using machine code.
30  Demonstrates PEEK, POKE, ADDR and INLINE.)
40
50 PROGRAM divmult2;
60
70 VAR r:REAL;
80
90 FUNCTION divby2(x:REAL):REAL;           (Function to divide by 2 ..
100                                     .. quickly)
110 VAR i:INTEGER;
120 BEGIN
130   i:=ADDR(x)+1;                       (Point to the exponent of x)
140   POKE(i,PRED(PEEK(i,CHAR)));        (Decrement the exponent of x.
150                                     see Appendix 3.1.3.)
160   divby2:=x
170 END;
180
190 FUNCTION multby2(x:REAL):REAL;        (Function to multiply by 2..
200                                     .. quickly)
210 BEGIN
220   INLINE(£00,£34,3);                  (INC (IX+3) - the exponent of x
230                                     - see Appendix 3.2.)
240   multby2:=x
250 END;
260
270 BEGIN
280   REPEAT
290     WRITE('Enter the number r ');
300     READ(r);                          (No need for READLN -- see
310                                     Section 2.3.1.4 )
320
330     WRITELN('r divided by two is',divby2(r):7:2);
340     WRITELN('r multiplied by two is',multby2(r):7:2)
350   UNTIL r=0
360 END.

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