

```

NEW
OK
10 INPUT "YOUR GUESS" A
20 IF A < 5 THEN PRINT "TOO SMALL"
30 IF A > 5 THEN PRINT "TOO BIG"
40 IF A <> 5 THEN 10
50 PRINT "YOU GUESSED IT!"
RUN
YOUR GUESS? 7
TOO BIG
YOUR GUESS? 4
TOO SMALL
YOUR GUESS? 5
YOU GUESSED IT!
OK

```

In line 10, XYBASIC requests a number A from the user. Line 20 checks whether $A < 5$, and PRINTs an appropriate message if it is. Similarly, line 30 checks whether $A > 5$ and PRINTs an appropriate message. Line 40 returns to line 10 for another guess if the guess was wrong. Notice that the IF command of line 40 lets the program loop until a given condition (namely, that the guess is correct) is satisfied, unlike previous examples where loops continued execution until interrupted with <control-C>.

In the logical formula you may use XYBASIC's relational operators, namely:

=	equal
>	greater than
<	less than
<=	less than or equal to
>=	greater than or equal to
<>	not equal

You may also use XYBASIC's logical operators, namely:

AND	logical AND
OR	logical inclusive OR
XOR	logical exclusive OR
NOT	logical negation

The following examples give an idea of the wide variety of logical formulas you can use in IF commands.

```

IF (X AND Y)=0 THEN 100
IF X+Y*3 = 4/Z THEN PRINT "GOTCHA"
IF A+B = 14 AND C*D = 12 OR Y=Z THEN J=K

```

STOP

The STOP command interrupts execution of your program, prints the line number at which the STOP occurs, and returns you to direct mode. For example: