Q1:
Write a program by QB language to read matrix \( A(3,5) \), then find the sum of the elements of each column in the matrix:

\[
A = \begin{bmatrix}
2 & 4 & 7 & 4 & 2 \\
1 & 4 & 5 & 7 & 8 \\
2 & 5 & 7 & 9 & 2 \\
\end{bmatrix}
\]

Q2:
By using QB language draw a flowchart and write a program to find the area of three shapes (rectangular, circle, triangle), by using control statements.

Q3:
A/ Write a program by QB language and draw flow chart to read the marks of 50 students in (Computer programming) as follow:

\( X_1 \) = the mark in first course exam.

\( X_2 \) = the mark in second course exam.

\( X_3 \) = the mark in the final exam
then print the average and the name of each student.

B/ Convert between the numeral system for the following:

1. \( (DB2)_{16} = ( \quad )_{8} \)
2. \( (33.333)_{2} = ( \quad )_{2} \)
3. \( (AB)_{16} = ( \quad )_{2} \)
4. \( (1111)_{2} = ( \quad )_{8} \)
Q4:
Write a program by QB language to read matrix A(n), then print the matrix after rotate it from the middle by put:

A(1)=A(n)
A(2)=A(n-1)
A(3)=A(n-2) and so...on

Q5:
A/ Express the following mathematic equations according to QB language and show the precedence rule

1. \( R = 3xyz + \frac{30x^2+y^2}{\sin(2y)} \)
2. \( R = -\log x - \frac{2x+xy^2}{\tan(2x)} \)
3. \( R = \frac{e^{-ln(x)} \cdot \tan(5+y-x)}{\log(x)-\cos y} \)

B/ Run the programs:

Program (1)
Read A,B
C=A/B
D=(2*A)-B+4
Print "C=";C,"D=";D
Restore XX
Read A,B
F=A/B
Print "F=";F
DATA 10.5
DATA 12.6
XX:
DATA 8.2
END

Program (2)
A=2
B=3
For K = 0 to 3
Print K+5
A=B*(K+1)
Next K
Print "B=";B
END

Q6:
Write a program by QB language to read and print \([A]\) and \([B]\) matrices then calculate and print matrix \([C]\), where: \([C]=([A]+[B])^T\)

\[
\begin{bmatrix}
1 & 3 & 3 \\
9 & -2 & 2 \\
1 & 22 & 0
\end{bmatrix}
\quad \begin{bmatrix}
1 & 1 & 1 \\
2 & 2 & 2 \\
3 & 3 & 3
\end{bmatrix}
\]

Good Luck

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