```
#!/bin/bash

while true; do
  echo "1. Additon"
  echo "2. Subtraction"
  echo "3. Multiplication"
  echo "4. Division"
  echo "5. Power"
  echo "6. Factorial"
  echo "7. GCD"
  echo "8. LCM"
  echo "9. Exit"
  echo "--------------------"
  read -p "Enter your choice: " choice

  case "$choice" in
    1|2|3|4|5|7|8)
      read -p "Enter n1: " n1
      read -p "Enter n2: " n2

      gcd=$n1
      b=$n2

      while [[ $b != 0 ]]; do
        temp=$b
        b=$((gcd % b))
        gcd=$temp
      done

      lcm=$(( ($n1 * $n2) / $gcd ))

      case "$choice" in
        1) echo "$n1 + $n2 = $(($n1 + $n2))" ;;
        2) echo "$n1 - $n2 = $(($n1 - $n2))" ;;
        3) echo "$n1 * $n2 = $(($n1 * $n2))" ;;
        4) echo "$n1 / $n2 = $(($n1 / $n2))" ;;
        5) echo "$n1 ^ $n2 = $(($n1 ** $n2))" ;;
        7) echo "GCD of $n1 & $n2 = $gcd" ;;
        8) echo "LCM of $n1 & $n2 = $lcm" ;;
      esac
    ;;
  6)
    read -p "Enter number: " num
    fact=1

    for ((i=1; i<=n; i++)); do
      fact=$((fact * i));
    done

    echo "$num! = $fact"
    ;;
  9) exit 0 ;;
  *) echo "Invalid choice! Try again" ;;

  esac
done
```

Output:

```
1. Additon
2. Subtraction
3. Multiplication
4. Division
5. Power
6. Factorial
7. GCD
8. LCM
9. Exit
-------------------
Enter your choice: 1
Enter n1: 6
Enter n2: 4
6 + 4 = 10

1. Additon
2. Subtraction
3. Multiplication
4. Division
5. Power
6. Factorial
7. GCD
8. LCM
9. Exit
-------------------
Enter your choice: 2
Enter n1: 58
Enter n2: 34
58 - 34 = 24

1. Additon
2. Subtraction
3. Multiplication
4. Division
5. Power
6. Factorial
7. GCD
8. LCM
9. Exit
-------------------
Enter your choice: 3
Enter n1: 6
Enter n2: 4
6 * 4 = 24

1. Additon
2. Subtraction
3. Multiplication
4. Division
5. Power
6. Factorial
7. GCD
8. LCM
9. Exit
-------------------
Enter your choice: 4
Enter n1: 45
Enter n2: 9
45 / 9 = 5

1. Additon
2. Subtraction
3. Multiplication
4. Division
5. Power
6. Factorial
7. GCD
8. LCM
9. Exit
-------------------
```

```
Enter your choice: 5
Enter n1: 2
Enter n2: 3
2 ^ 3 = 8
```