

1. Write an algorithm to accept two numbers and display their sum
2. Write an algorithm to calculate area and perimeter of Square
3. Write an algorithm to calculate area and circumference of Circle.
4. Write an algorithm to calculate simple interest.
Note: accept required information from user

Decision making statement

5. Write an algorithm to accept two numbers, and one of the following operators +, -, *, /. Perform the given operation and display result.
6. Write an algorithm to accept two numbers and display greater number
7. Write an algorithm to accept four numbers and display smallest and largest number
8. Write an algorithm to accept a number and decide whether it is an odd or even number
9. Write an algorithm to accept a number and display whether it is divisible by 5 and 7.
10. Write an algorithm to accept four digit year and display whether it is leap year
11. Write an algorithm to accept a number between 1 to 7 and display corresponding week day.
Note: Consider Sunday as the first day of week.
12. Write an algorithm to accept a number between 1 to 12 and display corresponding year.
13. Write an algorithm to display age in years, months and days.
Note: Accept birth date and today's date in format mm, dd and yyyy
14. Write a program to calculate time required to given destination. Accept following details from the user
 - a. Name of destination
 - b. Distance to destination
 - c. Speed per Kilometer
 - d. No of breaks in journey
 - e. Time per break
15. Write a program to display minimum denominations for a given value.
Note: Consider denominations of 500, 100, 50, 20, 10, 5, 2, 1

example: $1488 = (500 * 2) + (100 * 4) + (50 * 1) + (20 * 1) + (10 * 1) + (5 * 1) + (2 * 1) + (1 * 1)$

Loops

16. Write an algorithm to accept name and display the same for 15 times

17. Modify above program to accept name and number. Display name for given number of times

18. Write an algorithm to accept two numbers from user and display all numbers between those numbers

Example: If user enters 3 and 9 program should display numbers 3,4,5,6,7,8 and 9

19. Write an algorithm to display following pattern

```
1
22
333
4444
55555
666666
7777777
88888888
999999999
```

20. Modify above algorithm to accept a number (between 1 to 9) from user and display above pattern accordingly.

21. Write an algorithm to display following pattern

```
111111111
22222222
3333333
444444
55555
6666
777
88
9
```

22. Write an algorithm to display following pattern

```
111111111
22222222
3333333
444444
55555
6666
777
88
9
88
777
6666
55555
444444
3333333
22222222
```

11111111

23. Write an algorithm to display following pattern

```
*****
*****
*****
*****
****
***
**
*
```

24. Write an algorithm to display following pattern

```
*
**
***
****
*****
*****
*****
*****
*****
*****
```

25. Write an algorithm to display following pattern

Note: There are nine * in first line

```
*****
*****
*****
***
*
```

26. Write an algorithm to display following pattern

Note: There are nine * in last line

```
*
***
*****
*****
*****
*****
```

27. Modify above algorithms two algorithms to accept number from user (less than 19) and display above patterns

Note: Number of * in first and last line would depend on number entered by user

28. Write an algorithm to display numbers 10 to 1 in reverse order.

Note: Output should be 10, 9, 8, 7,, 2, 1

29. Write an algorithm to accept number and display its table.

Note: If user enters 7 output should be as follows

7 X 1 = 7

7 X 2 = 14

7 X 3 = 21

7 X 4 = 28

7 X 10 = 70

30. Modify above algorithm to accept two numbers and display table of numbers between them.

Note: If user enters 3 and 7. Display table of 4,5 and 6

31. Write an algorithm to display 10 numbers that are divisible by 5 and 7

32. Modify above algorithm to accept two numbers from user and display all numbers between them that are divisible by 3

Arrays

33. Write an algorithm to accept 10 numbers and display in ascending order. Also display the same numbers in descending order.

34. Write an algorithm to accept string from user and display number of characters in it

Note: Assume that last character of a string is '\0' (\zero)

35. Write an algorithm to accept string from user and a single character. Display how many times given character occurs in a given string.

36. Write an algorithm to accept a string and display whether it is a palindrome

Note: Palindrome is a string that reads same in opposite direction for example. Madam

37. Write an algorithm to accept number between 0 to 20 and display in words

Example: If user enters 8 output should be "Eight"

38. Write an algorithm to accept 10 words and display them first in ascending order and then in descending order

39. General

39. Write an algorithm to accept current time in 24 hrs (HH:MM) and minutes from user and display time before and after given minutes.

Example: if given time is 18:45 and minutes is 50 output should be 17:55 and 19:35

40. Modify above algorithm to accept time in 12 hrs and display output in 24 hrs

Example: if given time is 6:45 pm and minutes is 50 output should be 17:55 and 19:35

41. Modify above algorithm to accept time in 12 hrs and display output in 12 hrs

Example: if given time is 6:45 pm and minutes is 50 output should be 5:55 pm and 7:35 pm

42. Write an algorithm to accept current date and number of days. Display date before and after given days.
Example: if given date is 13th November, 2008 and number of days is 13 output should be 30th October, 2008 and 26th November 13, 2008
43. Write an algorithm to accept following inputs and display calender of given month.
- f. Month in number
 - g. Year in number
 - h. Day on 1st of given month and year
44. Write an algorithm to display calendar of given month and year (greater than 1980).
Note: Assume 1st January, 1980 was on Tuesday.
45. Write an algorithm to accept date greate than 1st January, 1980 and display day of that date.
Example: If given date is 12th November, 2008 output should be Wednesday.
46. Write an algorithm for currency conversion. Accpet following details from user
- i. FromCurrency
 - j. ToCurrency
 - k. Amount to convert (say X)
 - l. Currency rate (say R)
 - m. Commission (say C) is as follows
 - 0000 > Amt <= 500 – 2% on Amt to convert
 - 0500 > Amt <= 1500 – 3% on Amt to convert
 - 1500 > Amt <= 2500 – 4% on Amt to convert
 - Amt > 2500 – 5% on Amt to convert
- Output should be
Amount: X FromCurrency
Rate: R FromCurrency
Commission: C FromCurrency
Total Amount: in ToCurrency