

COMPUTER APPLICATION
CLASS VIII
ALGORITHM AND FLOWCHART (PART-II)

Write algorithms and draw flowcharts for the following

Question 1

Accept the length of two different line segments and check whether they are equal or unequal. Display the message accordingly.

Algorithm

Step 1: Start

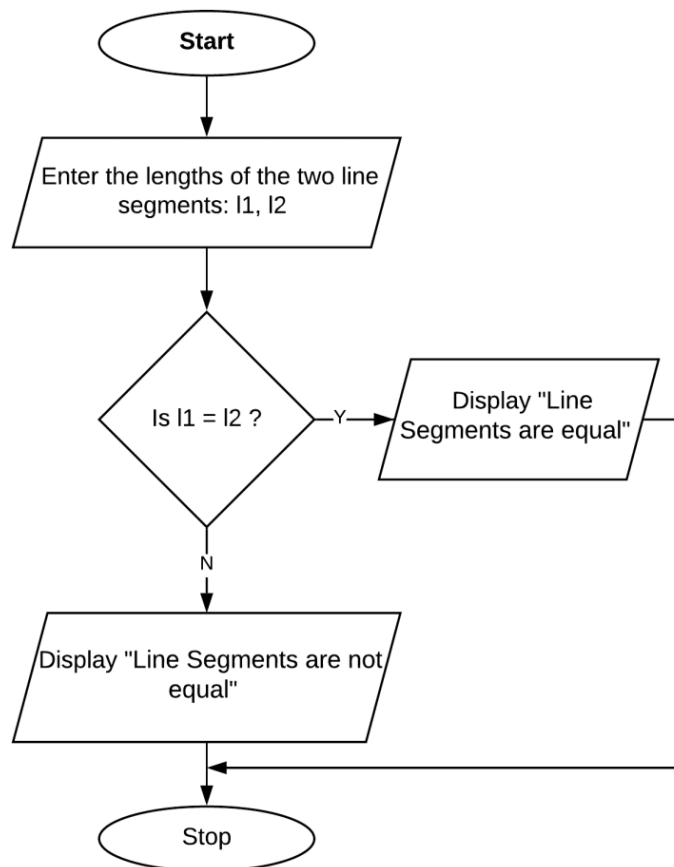
Step 2: Accept the length of the two line segments as l1 and l2.

Step 3: If l1 and l2 are equal, then display 'Line Segments are equal'.

Step 4: If l1 and l2 are not equal, then display 'Line Segments are not equal'.

Step 5: Stop

Flowchart



Question 2

Accept the age of a person and check whether he/she is eligible to vote or not. A person is eligible to vote only when he/she is 18 years or more.

Algorithm

Step 1: Start

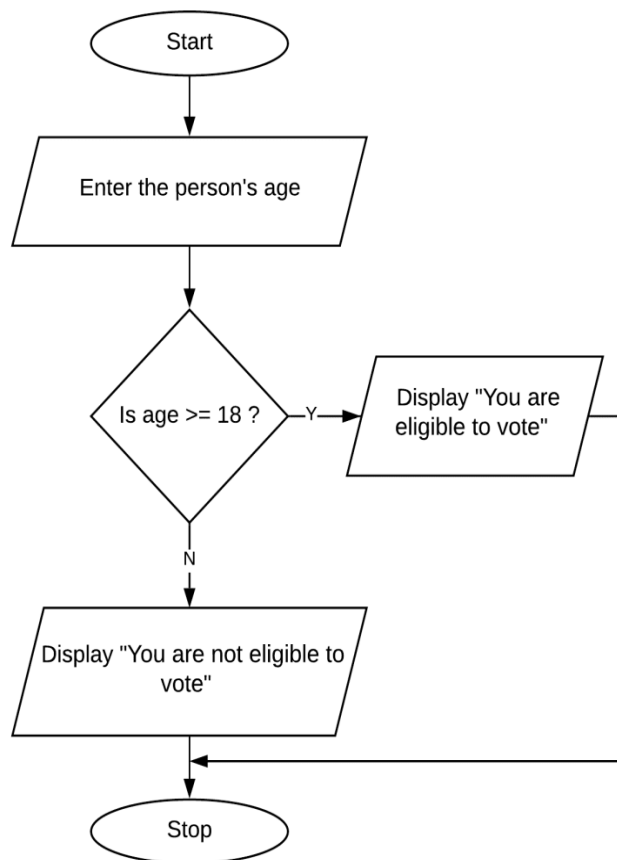
Step 2: Accept the age of the person.

Step 3: If age is greater than or equal to 18, then display 'You are eligible to vote'.

Step 4: If age is less than 18, then display 'You are not eligible to vote'.

Step 5: Stop

Flowchart



Question 3

Accept three numbers and check whether they are 'Pythagorean Triplets' or not.
Display the message accordingly.

(Hint: Use Pythagoras Formula for a Right-angled Triangle: $h = p^2 + b^2$)

Algorithm

Step 1: Start

Step 2: Take 3 numbers as input (Say A,B,C)

Step 3: If $A^2 = B^2 + C^2$, display 'Pythagorean Triplets'

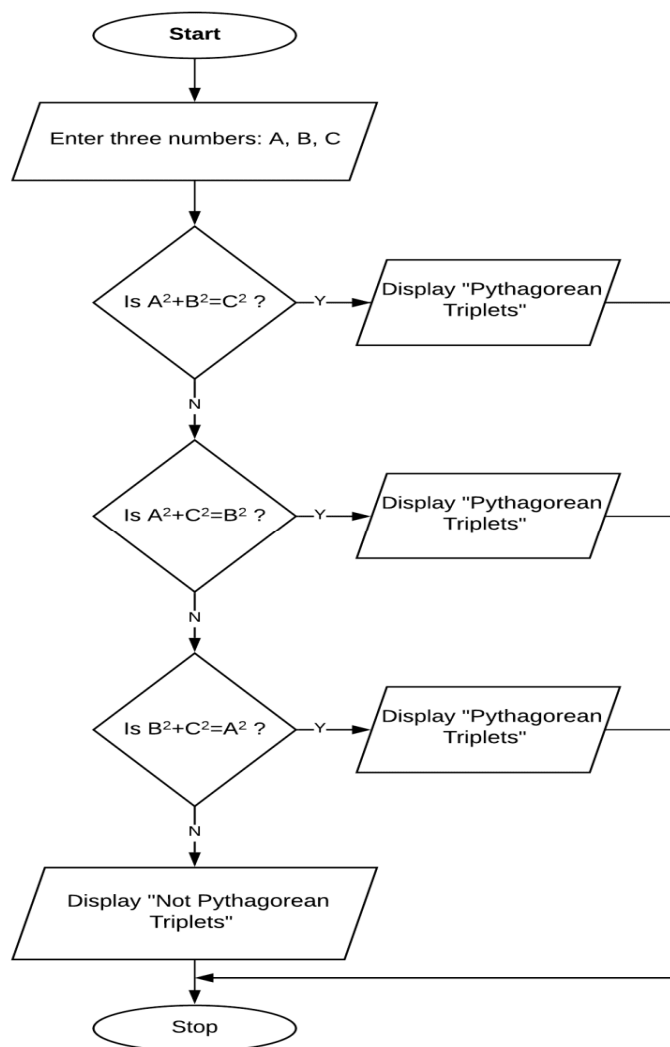
Step 4: If $B^2 = A^2 + C^2$, display 'Pythagorean Triplets'

Step 5: If $C^2 = A^2 + B^2$, display 'Pythagorean Triplets'

Step 6: If no condition of Step 3,4,5 match, display 'Not Pythagorean Triplets'

Step 7: Stop

Flowchart



Question 4

Accept the name and marks obtained by a student in Computer Project. Display the grades as per the table given below:

Marks obtained	Grade
60% or more but less than 80%	B
40% or more but less than 60%	C
Less than 40%	No Grade

Algorithm

Step 1: Start

Step 2: Accept the name, marks.

Step 3: if(marks>=80) then display “grade A”

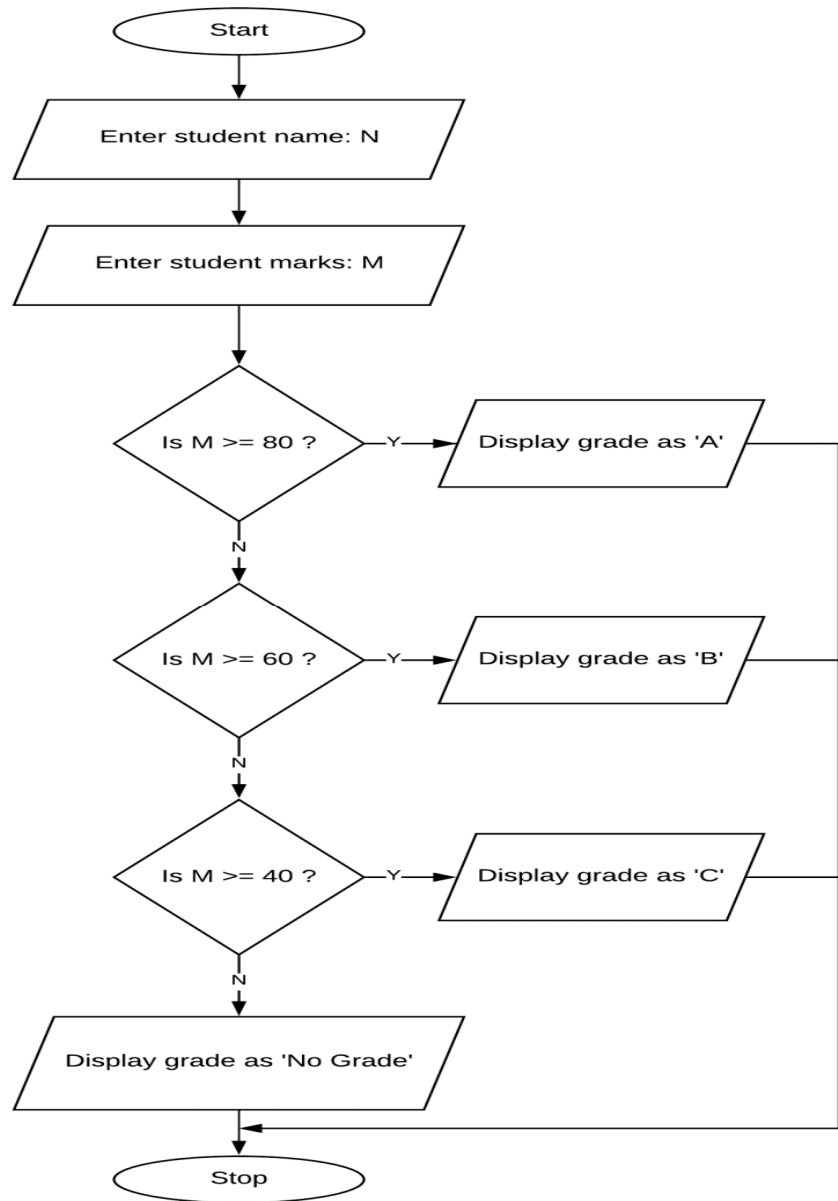
Step 4: if(marks>=60 && marks<80) then display “grade B”

Step 5: if(marks>=40 && marks <40) then display “grade C”

Step 6: if(marks<40) then display “no grade”

Step 7: Stop

Flowchart

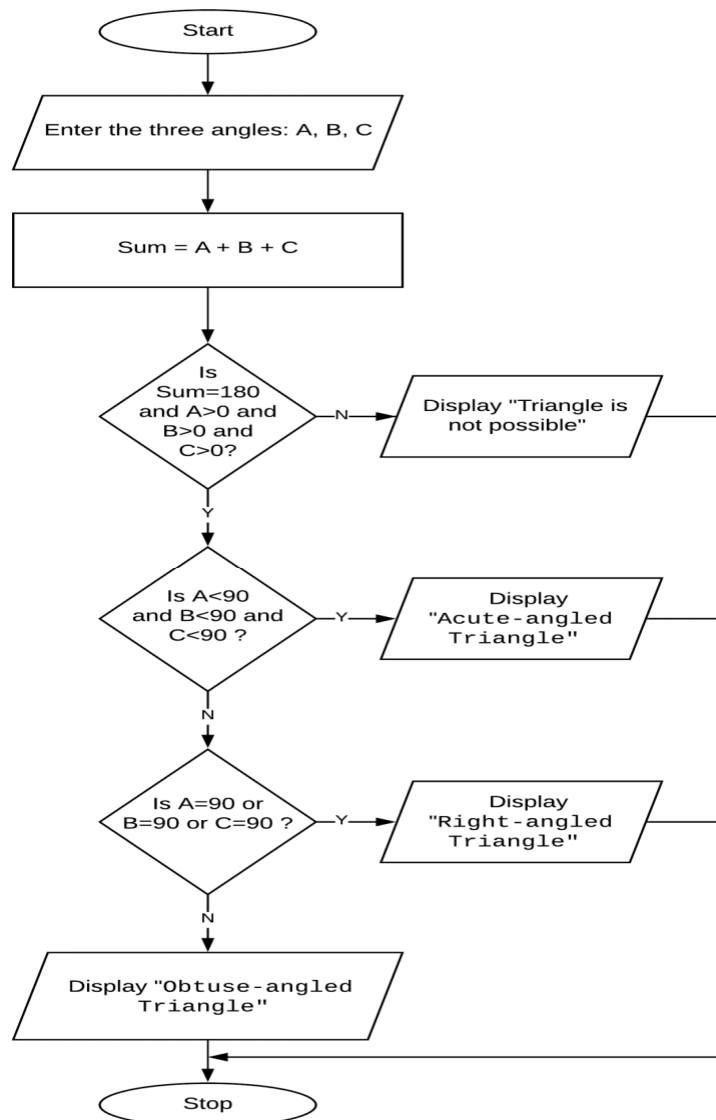


Draw flowcharts for the following

Question 1

Input three angles of a triangle and check whether a triangle is possible or not. If possible, then check whether it is an 'Acute-angled Triangle', 'Obtuse-angled Triangle' or a 'Right-angled Triangle'.

Flowchart

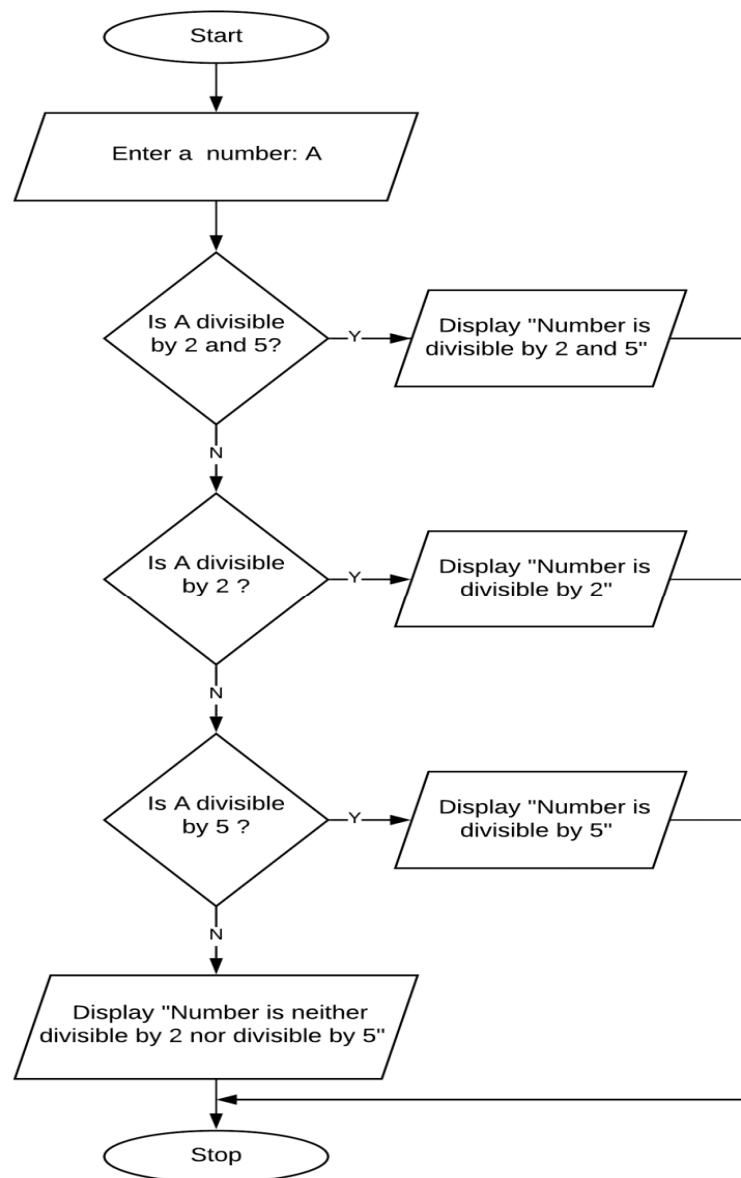


Question 2

Accept a number and check:

- (a) whether the number is divisible by 2 and 5.
 - (b) whether the number is divisible by 2 but not by 5.
 - (c) whether the number is divisible by 5 but not by 2.
- Display the message accordingly

Flowchart



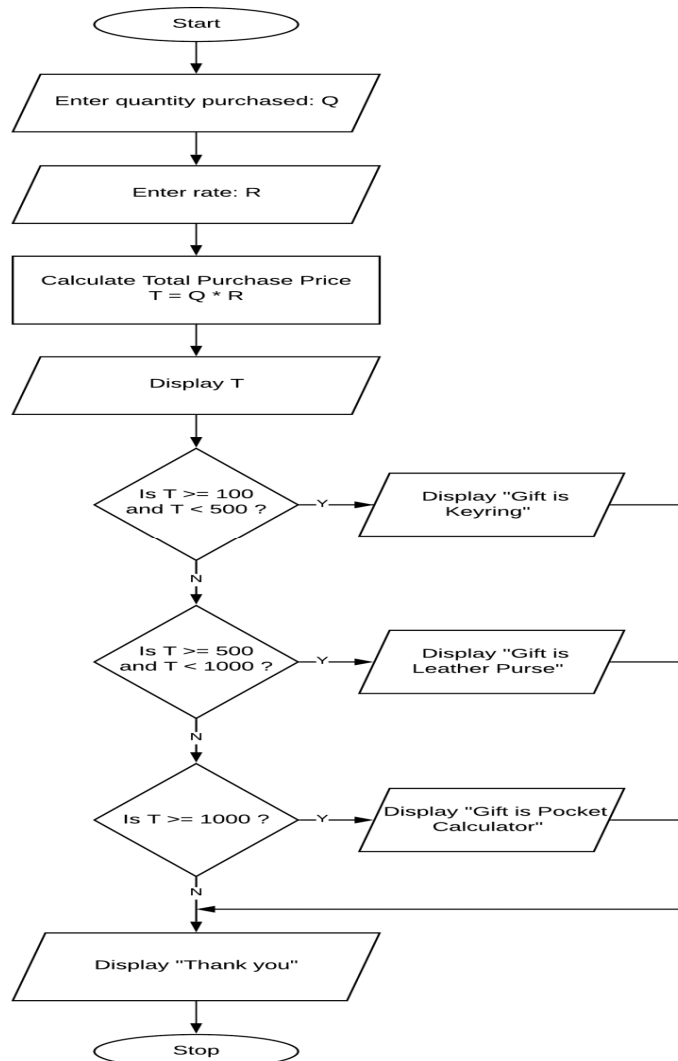
Question 3

Input the quantity purchased and the rate. Calculate the total purchase price and display it along with the gift to be presented. The gifts to the customers are given as under:

Amount of Purchase (Rs.)	Gift
100 and above but less than 500	A key ring
500 and above but less than 1000	A leather purse
1000 and above	A pocket calculator

The flowchart will end with a 'Thank you' message.

Flowchart



Question 4

A librarian charges a fine for books, if returned late. The tariff for the fine is given below:

No. of days	Fine
For the first ten days	40 paise per day
Eleven to twenty days	60 paise per day
More than twenty days	80 paise per day

Flowchart

