Algorithm

Conditional:

Problem 1

1. Start Program
2. Declare num1 and num2 as integer
3. Display “Input num1:”, input and store in num1.
4. Display “Input num2:”, input, and store in num2.
5. If num1 is greater than num2, display “Maximum: num1” and “Minimum: num2”.
6. If num 1 is less than num2, display “Maximum: num2” and “Minimum:num1”.
7. End Program

Problem 2

1. Start Program
2. Declare num1, num2, num3 as integer
3. Display “Input num1:”, input and store it in num1.
4. Display “Input num2:”, input and store it in num2.
5. Display “Input num3:”, input and store it in num3.
6. Check if num1 > num2 and num1>num3, if true then display “Maximum=num1” and “Minimum=num2”.
7. Check if num2>num3, if true, display “Maximum = num2” and “Minimum = num1”.
8. Check if num2<num3, if true, display “Maximum=num3” and “Minimum=num1”.
9. End Program

Problem 3

1. Start Program
2. Declare no as integer
3. Display “Input Number: “, input and store in no
4. Check if no = 0, if true then display “no is zero”
5. Check if no > 0, if true then display “no is positive”
6. Check if no < 0, if true then display “no is negative”
7. End Program
8. Start program
9. Declare no as integer
10. Display “Input number”, input and store in no
11. If no % 5 == 0 and no%11==0, display “no is divisible by 5 and 11”
12. If no%5 != 0 and no%11!=0, display “no is not divisible by 5 and 11
13. End program

Problem 5

1. Start Program
2. Declare no as integer
3. Display “Input Number:”, Input and Store it in no.
4. If no%2==0, display “no is even”
5. If no%2!=0, display “no is odd”
6. End program

Problem 6

1. Start Program
2. Declare week as integer
3. Display “Input week number:” and store in week
4. Check if week == 1, if true then display Sunday
5. Check if week == 2, if true then display Monday
6. Check if week == 3, if true then display Tuesday
7. Check if week == 4, if true then display Wednesday
8. Check if week == 5, if true then display Thursday
9. Check if week == 6, if true then display Friday
10. Check if week == 7, if true then display Saturday
11. Check if week > 7, if true then display Invalid
12. End program

Program 7

1. Start Program
2. Declare month as integer
3. Display “Input month number”, input and store in month
4. Check if month == 1 or month == 3 or month == 5 or month == 7 or month == 8 or month == 10 or month == 12, if true then display “It contains 31 days.
5. Check if month == 4 or month == 6 or month == 9 or month == 11, if true then display it “It contains 30 days”
6. Check if month == 2, If true then display “It contains 28 days”
7. Check if month > 12, if true then display invalid
8. End program

Program 8

1. Start Program
2. Declare amount, fiveH, oneH, fifty, twenty, ten, five, two, one as integer
3. Display “Enter amount: “, input and store in amount
4. Check if amount is more than 500, if true, then use the following formulas
   1. fiveH = amount / 500
   2. oneH = (amount % 500) / 100
   3. fifty = (amount % 100) / 50
   4. twenty = (amount % 50) / 20
   5. ten = ((amount % 50) % 20) / 10
   6. five = (amount % 10) / 5
   7. two = ((amount % 10) % 5) / 2
   8. one = ((amount % 10) % 5) % 2
5. Check if amount is less than 500, if true then use the following formulas
   1. fiveH = 0
   2. oneH = amount / 100
   3. fifty = (amount % 100) / 50
   4. twenty = (amount % 50) / 20
   5. ten = ((amount % 50) % 20) / 10
   6. five = (amount % 10) / 5
   7. two = ((amount % 10) % 5) / 2
   8. one = ((amount % 10) % 5) % 2
6. Display the following:

500 = fiveH

100 = oneH

50 = fifty

20 = twenty

10 = ten

5 = five

2 = two

1 = one

1. End program

Program 9

1. Start Program
2. Declare first, second, third, and sum as integer
3. Display “Input first angle”, input and store in first
4. Display “Input second angle”, input and store in second
5. Display “Input third angle”, input and store in third
6. Use formula Sum equals first + second + third
7. If Sum is equal to 180, display “ Triangle is valid”, if not, display “Triangle is not valid”
8. End program

Program 10

1. Start Program
2. Declare a,b,c as integer
3. Display “Input first side: “, input and store in a
4. Display “Input second side: “, input and store in b
5. Display “Input third side: “, input and store in c
6. Check if the conditions are true:
   1. a+b>c
   2. a+c>b
   3. b+c>a

if true, display “Triangle is valid” else “Triangle is invalid”

1. End Program

Problem 11

1. Start Program
2. Declare a,b,c
3. Display Input first side, input and store in a
4. Display Input second side, input and store in b
5. Display Input third side, input and store in c
6. Check if a==b && b ==c, if true then display Triangle is equilateral
7. Check if (a==b&& b!=c)||(a==c&&c!=b)||(b==c&&c!=a), if true then display Triangle is iscoseles
8. Check if a!=b && b!=c && a!=c, if true then display Triangle is scalene
9. End program

Prog 15

1.start program

2.declare salary, hra , da, gs as float

3.if salary >= 20001, compute hra = salary \*.30 and da = salary \* .95.

4.if salary >= 10001 and salary <=20000, compute hra = salary \*.25 and da = salary \* .90.

5.if salary >= 10000, compute hra = salary \*.20 and da = salary \* .80.

6. compute as using hra + da + salary.

7. Display "Gross Profit = gs"

8. End Program.

Prog 14

1.Start program

2.declare a,b,c,d,e as integer avg as float.

3.print " enter 5 grades ", input and store in a,b,c,d,e

4.Compute for average using (a+b+c+d+e)/5 and store in avg

5.print percentage = avg

6.if avg = 90 and avg > 80 print "grade A"

7.if avg < 90 and avg > 80 print "grade B"

8.if avg < 80 and avg > 70 print "grade C"

9.if avg < 70 and avg > 60 print "grade D"

10.if avg < 60 and avg > 50 print "grade E"

11.if avg < 40 print "grade F"

12. END PROGRAM

PROG 13

1.start progam

2.declare cost, selling as integer

3.display "input cost price", input and store in cost

4.display "input selling price", input and store selling.

5.if selling-cost > 0, use case 1 and pirnt profit = selling -cost.

6.if false print "coss = cost-selling"

7.end program

progr 12

1.Start program

2.declare a,b,c as integer and float1,float2,discrmininant as float

3.display "input a" input and store in a

4.display "input b" input and store in b

5.display "input c" input and store in c

6.compute the formula -b+sqrt b^2-4ac/2a in root1

7.compute the formula -b-sqrt b^2-4ac/2a in root2

8.compute b^2-4ac in discriminant

9.check if discriminant < 0, if true the print root1 = imaginary and root2 = imaginary

10.if false, print root1 = root1 and root2 = root2

11.end program