###### 1)

Grafo:



Cálculo de complejidad:

v(f):8-7+2=3

Caminos:

1=1,2,3,4,Fin

2=1,3,5,6,fin

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| 0 | 1 | 1 |
| 1 | -1 | 2 |

###### 2)

Grafo: 

Cálculo de complejidad:

v(f):=4 regiones

Caminos:

1=1,2, fin

2=1,3,2,fin

3=1,3,4,2,fin

4=1,3,4,5,fin

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| a = 2; b = 1; c = 0; | 6 | 1 |
| a = 1; b= 6; c = 0 | 6 | 2 |
| a = 0; b = 1; c = 4 | 6 | 3 |
| a = 1; b = 1; c = 3 | 4 | 4 |

###### 3)

Grafo:



Cálculo de complejidad:

v(f):=4 regiones

Caminos:

1=1,2, 7, 8, 9, fin

2=1, 2, 7, 3, 4, 5, 9, fin

3=1, 2, 3, 4, 6, 9, fin

4=1,2,7,3, 4, 6, 9 ,fin

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| x = 5; y = 0; z = 3; max = 10 | max = 5 | 1 |
| x = 5; y = 0; z = 7; max = 10 | max = ?? | Camino imposible |
| x = 0; y = 0; z = 10 | max = 10 | 3 |
| x = 5; y = 0; z = 6 | max = 6 | 4 |

###### 4)

Grafo:



Cálculo de complejidad:

v(f):= 4 regiones

Caminos:

1=1, 2, 4, 5, 6, 7 FIN

2=1, 2, 4, 3, 6, 7, FIN

3=1, 2, 3, 6, 7, FIN

4=1, 2, 3, 6, 2, 3, 6, 7, FIN

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| n = 20 suma+= 20  conta += 1  total\_num += 1 | total\_num = 1  suma2 = 0 | 1 |
| n = 40 suma+= 40  suma2+= 40  conta += 1  total\_num += 1 | total\_num = 1  suma 2 = 0 | 2 |
| n = 70 suma+= 70  suma2+= 70  conta += 1  total\_num += 1 | total\_num = 1  suma 2 = 70 | 3 |
| n = 20 suma+= 20  conta += 2  total\_num += 2 | total\_num = 2  suma 2 = 0 | 4 |

###### 5)



V(f)=5

1=1,2,4,5,7,9,1,2,10,11,Fin

2=1,10,12,fin

3=1,2,4,5,6,8,9,1,10,11,fin

4=1,2,3,5,7,9,1,10,11,fin

5=1,2,4,5,6,7,9,1,10,11,fin

caso de prueba

| Input | Output | Camino |
| --- | --- | --- |
| as = 1; value=998; min = 1; max =-997 | null | 1 |
| as = 0; value=-999; min = 12; max = 45 | -999 | 2 |
| as = 1; value=-998; min = 998; max = 998 | 999 | 3 |
| as = 0; value=-999; min = 12; max = 991 | -999 | 4 |
| as = 0; value=-999; min = 1000; max = 45 | -999 | 5 |

###### 6)

Grafo:



Cálculo de complejidad:

v(f):= 3(NP) + 1 = 4

Caminos:

1=1, 2, 3, FIN

2=1, 2, 4, 5, 6, 4, 2, 3, FIN

3=1, 2, 3, 6, 7, FIN

4=1, 2, 3, 6, 2, 3, 6, 7, FIN

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| a = 2; b = 1; c = 0; |  | 1 |
| a = 1; b= 6; c = 0 | 6 | 2 |
| a = 0; b = 1; c = 4 | 6 | 3 |
| a = 1; b = 1; c = 3 | 4 | 4 |

###### 7)

Grafo:



Cálculo de complejidad:

v(f):= 4 regiones

Caminos:

1=1, 2, 4, 5, 6, 7 FIN

2=1, 2, 4, 3, 6, 7, FIN

3=1, 2, 3, 6, 7, FIN

4=1, 2, 3, 6, 2, 3, 6, 7, FIN

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| a = 2; b = 1; c = 0; |  | 1 |
| a = 1; b= 6; c = 0 | 6 | 2 |
| a = 0; b = 1; c = 4 | 6 | 3 |
| a = 1; b = 1; c = 3 | 4 | 4 |

###### 8)



Cálculo de complejidad:

v(f):= 16-12+2= 6

Caminos:

1=1, 3, 4,7 FIN

2=1, 3, 4,5,7 FIN

3=1, 3, 4,5,6,7 FIN

4=1, 3,4,5,6,8 FIN

5=1, 3,4,5,6,9,10 FIN

6=1, 3,4,5,6,9,11 FIN

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| a = 150; b = 1; c = 1; | Not Triangle | 1 |
| a = 3; b= 150; c = 5 | Not Triangle | 2 |
| a = 3; b = 7; c = 11 | Not Triangle | 3 |
| a = 5; b= 5; c = 5 | Equilateral | 4 |
| a = 6; b = 7; c = 8 | Scalene | 3 |
| a = 6; b = 6; c = 8 | Isosceles | 3 |
|  |  |  |

###### 9)



Cálculo de complejidad: 10-8+2=4

v(f):= 4 regiones

Caminos:

1=1,2,FIN

2=1,3,4,FIN

3=1,3,5,6,1…

4=1,3,5,7,1…

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| top=10 mid=x bot=25 | Fin | 1 |
| top=5 mid=4 bot=3 key=4 | Return | 2 |
| top=5 mid=4 bot=3 key=7 | bottom = 5 | 3 |
| top=5 mid=4 bot=3 key=2 | top = 3 | 4 |



Cálculo de complejidad: 10-7+2=5

v(f):= 5 regiones

Caminos:

1=1,2,FIN

2=1,3,FIN

3=1,3,4FIN

4=1,3,4,5IN

5=1,3,4,6,7 FIN

Caso de prueba:

| Input | Output | Camino |
| --- | --- | --- |
| X < 0 | Y = -1 | 1 |
| X = 10 | Y = 40 | 2 |
| x = 35 | Y + (x - 25) \* 0,5 | 3 |
| x = 70 | y = y + 50 + (x -30) \* 0.1 | 4 |
| x = 3500 y < 15 | y = y \* 0.9 | 5 |