



THINK BIGGER

**TECHNICAL
PSEUDOCODE**



What will be the output of the following pseudocode if p=29?

```
integer combine (integer p)
```

```
if (p <= 17)
```

```
    combine (combine (p * 2))
```

```
end if
```

```
return p + 3
```

```
end function combine()
```

a) 32

b) 12

c) 13

d) 11



What will be the output of the following pseudocode if $x=2$ & $y=5$?

integer p(integer x, integer y)

if (y EQUALS 0)

return 1

else if (y mod 2 EQUALS 0)

return $p(x, y/2) * (p(x, y/2))$

else

return $x * p(x, y/2) * p(x, y/2)$

end if

end function p()

a) 32

b) 81

c) 36

d) 27



What will be the output of the following pseudocode when x=15 and y=20?

```
integer p(integer x, integer y)
if(x&y EQUALS 0)
    return 1+x
else
    return 1+y
end if
end function p()
```



- a) 11
- b) 10
- c) 21
- d) 20



What will be the output of the following pseudocode?

Integer a, b, c

Set c = 12, b = 4

a = c / b

c = b >> a

Print c

a) 2

b) 0

c) 6

d) 1



What will be the output of the following pseudocode when a=10, b=13 & c=7?

Integer funn(integer a, integer b, integer c)

if(4 < c)

c= 1 + a

c = c + c + b

end if

return a + b+ c

end function funn ()



- a) 58
- b) 56
- c) 29
- d) 55



What will be the output of the following pseudocode?

Integer a, k, j, i

set a=10,k= a/4,j=k/1

for (each i from 1 to j)

print i+j

end for

a) 3 3

b) 3 4

c) 4 3

d) 4 4



What will be the output of the following pseudocode?

integer i,j

set i=0, j=9

do

i= i + j;

if ((j= j - 1) < (i= i + 1))

JUMP OUT OF LOOP

end if

while (i < 5);

print i,j



INNATE TALENT
TRANSFORMING FUTURE

- a) 6,6
- b) 5,5
- c) 10,8
- d) 4,4



What will be the output of the following pseudocode?

integer a, b

for(each a from 1 to 2)

b=17

print b + a- a * a

end for

print a + 1



- a) 17 4 15
- b) 17 17 16
- c) 1 2 3
- d) 17 15 4

Note: Assume that the outputs are separated by spaces, not new lines.



What will be the output of the following pseudocode?

Integer j, m

Set m=1

Integer a[4] = { 0,2,3,3}

if (a[1]<1)

 if (a[2]<2)

 m=a[3]

 Else

 m=a[1]

 End if

 m=m^a[1]

End if

Print m

- a) 5
- b) 0
- c) 1
- d) 2



What will be the output of the following pseudocode?

```
integer fun(integer a)
```

```
integer b
```

```
set b= 10
```

```
return a- b
```

```
end function fun()
```

- a) 50
- b) 60
- c) 40
- d) None of the mentioned options



What will be the output of the following pseudocode?

integer number

set number = 1

do

print number

number = number + 1

print number + 1

while (number <=0)

end do while

print number



INNATE TALENT

TRANSFORMING FUTURE

a) 2 1 1

b) 1 0 3

c) 1 1 2

d) 1 3 2

Note: Assume that the outputs are separated by spaces, not new lines.



What will be the output of the following pseudocode?

Integer pp,qq,rr

Set pp=1, qq=7, rr=3

for (each rr from 4 to 7)

 if ((pp-qq+rr)<(rr-pp))

 continue

 End if

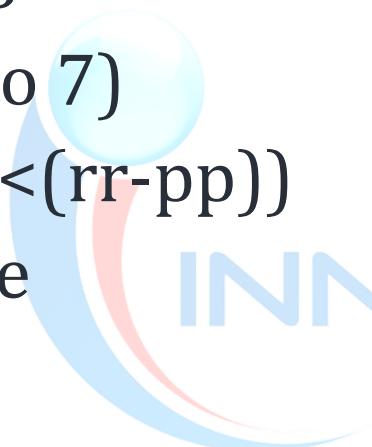
 qq=pp[^]qq

 pp=(3+12)+rr

End for

Print pp+qq

- a) 54
- b) 8
- c) 35
- d) 41



What will be the output of the following pseudocode?

```
integer merge (integer x)
if (x < 2)
    merge (merge (x + 1))
end if
return x
end function merge (2)
```



INNATE TALENT
TRANSFORMING FUTURE

- a) 2
- b) 1
- c) 3
- d) 4



What will be the output of the following pseudocode?

Integer j, m

Set m=1

Integer a[5] = {7, 26, 13, 10, 1}

if (a[0]+a[1]>a[2])

 for (each j from 0 to 1)

 if (a[j+1]>1)

 m=1

 Else

 m=a[j+2]

 End if

End for

End if

Print m

- a) 1
- b) 10
- c) -4
- d) 6



What will be the output of the following pseudocode when 10, and 20 are passed into the given function?

Integer funn(integer p, integer q)

integer r

set r = 1

p= p >> r

q= q>> r

return p + q

end function funn ()

a) 15

b) 1

c) 21

d) -5



What will be the output of the following pseudocode if a=3 and b=4?

```
integer funn(integer a, integer b)
```

```
if(a + 2 - 1 - 1)
```

```
return a
```

```
end if
```

```
if( b + 1)
```

```
return a + 1 + b + 1
```

```
end if
```

```
return b
```

```
end function funn()
```



- a) 1
- b) 2
- c) 0
- d) 3



What will be the output of the following pseudocode?

integer i, k

set k=0

for (each 1 from 3&4 to 15)

k= k+1

end for

print k

a) 7

b) 8

c) 6

d) 16



What will be the output of the following pseudocode for a = 1, b = 6, and c = 4?

Integer funn(Integer a, Integer b, Integer c)

for (each c from 4 to 6)

 a=(a+10)+a

 if ((b+a)>(a-b))

 continue

 Else

 jump out of the loop

 End if

 b=1+b

End for

return a+b

End function funn()

Note:- Continue: When a continue statement is encountered inside a loop, control jumps to the beginning of the loop for skipping the execution of statements inside the body of the loop for the current iteration.

What will be the output of the following pseudocode?

Integer a=33,j=9,b

for (each i from 1 to 3)

 b=j/i

 a=a+b

 if (a mod 2 EQUALS 0)

 Print a

 Else

 Print a-1

End for

Note:- MOD finds the remainder after the division of one number by another. For example, the expression "5 MOD 2" would evaluate to 1 because 5 divided by 2 leaves a quotient of 2 and remainder of 1.

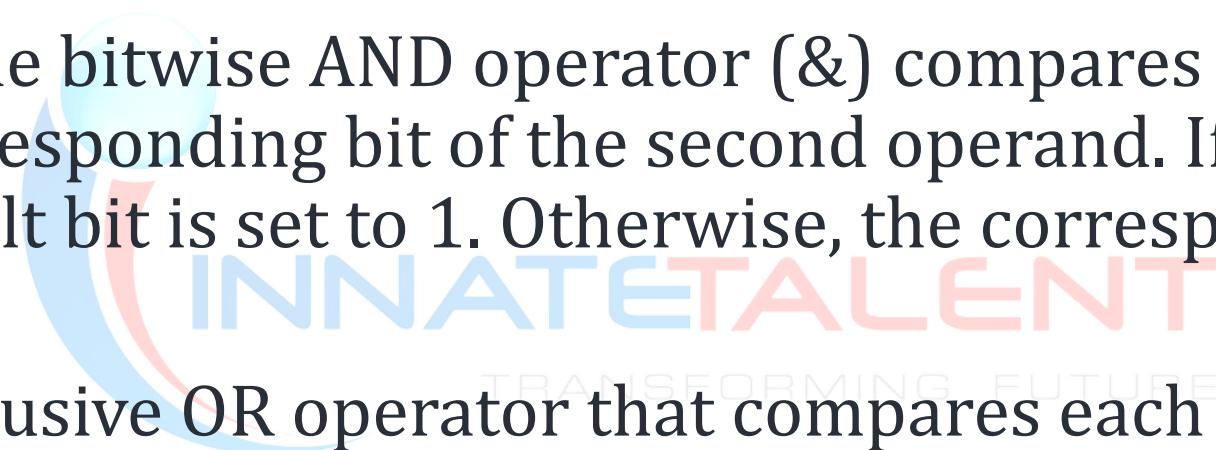
What will be the output of the following pseudocode for $a = 2$, $b = 7$, and $c = 6$?

Note:-

$\&$: bitwise AND - The bitwise AND operator ($\&$) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

$^$ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bits of its second operand.

If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.



Integer funn(Integer a, Integer b, Integer c)

```
    if ((b^a^c) < (a^c^b))
        if ((a^b^c) > (c^a))
            c=a&b
        End if
        c=7&a
    Else
        if (a>b)
            a=11+b
        End if
    End if
    return a+b+c
End function funn()
```

- a) 15
- b) 27
- c) 14
- d) 19



What will be the output of the following pseudocode?

Note:-

&& : Logical AND - The logical AND (&&) operator returns the Boolean value true (or 1) if both operands are true and return false (or 0) otherwise.

&: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Set a=2,b=2,c=15

if (a<b && (c+a)>(a-c))

 c=c+a

End if

Print a+b+c

- a) 39
- b) 19
- c) 25
- d) 5



What will be the output of the following pseudocode?

Integer a,b,c

a) 31

Set a=4,b=2,c=15

b) 28

a=a+b

c) 40

b=10&b

d) 45

b=(c&4)+a

Print a+b+c



Note:- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



What will be the output of the following pseudocode?

Integer m

Set m = 0

Integer p[5] = {1, 1, 0, 1, 7}

If (p[0] && P[4])

m = p[1]

End If

If (p[2] && p[3])

m = p[2]

End If

Print m

- a) 1
- b) -5
- c) 4
- d) 18



What will be the output of the following pseudocode?

Integer j, m

Set m=2

Integer a[4] = { 2,1,1,2}

m=m^a[2]

if (a[1]>1)

 m=m^1

Else

 m=m^2

End if

Print m

- a) 8
- b) -1
- c) 1
- d) 12



Note:- ^ is the bitwise exclusive OR operator that compares each bits of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.



What will be the output of the following pseudocode?

Integer j, m, a[]

Set a[]={2,3,5,7,1}

m=a[0]

For (each j from 0 to 4)

 if (m<a[j])

 m=a[j]

 End if

End for

Print m

- a) 2
- b) 3
- c) 5
- d) 7



What will be the output of the following pseudocode for a = 2, b = 8, and c = 4?

Integer funn(Integer a, Integer b, Integer c)

 if ((b+c) < (c-b))

 a=10+c

 a=b+c

 Else

 a=(c^b)+b

 b=8+c

 End if

 return a+b+c

a) 45

b) 36

c) 27

d) 46



INNATE TALENT
TRANSFORMING FUTURE

Note:- ^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.



What will be the output of the following pseudocode?

Integer j, m

Set m=0

Integer a[4] = { 3,0,2,1}

for (each j from 0 to 3)

 if (a[j])

 m=a[j]

 End if

 if (j)

 m=a[j]+1

 End if

End for

Print m

[Note :- If(x) gets executed if value inside if(), i.e., x is not zero.]



INNATE TALENT

TRANSFORMING FUTURE

a) 2

b) 5

c) 1

d) 8



INNATE TALENT
TRANSFORMING FUTURE

What will be the output of the following pseudocode?

Note:-

&: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

^ is the bitwise exclusive OR operator that compares each bits of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.

Integer a,b,c

Set a=0,b=4,c=8

if ((c+a+b)>(b-c))

 b=(c+c)+a

 c=(c+c)+a

End if

if ((c^a^b)<(b^c))

 a= 3 & a

End if

Print a+b+c

- a) 32
- b) 38
- c) 33
- d) 29



What is the output for the given pseudocode for input n=4?

function (input n)

{

 if (n<2)
 return n;

 else

 return function(n-1)+function(n-2);

}

a) 2

b) 1

c) 8

d) 3



What will be the output of the following pseudocode?

Integer a,b,c

Set a=0,b=11,c=10

for (each c from 4 to 6)

 a=(3+4)+b

 b=a&a

End for

b=(c+c)+b

Print a+b

- a) 78
- b) 69
- c) 88
- d) 84



Note:- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



What will be the output of the following pseudocode for a = 2, and b = 7?

```
Integer funn(Integer a, Integer b)
    if (b>a && b>6)
        retrun funn(b,a)+funn(b,1)
    End if
    return 1
```

- a) 16
- b) 3
- c) 1
- d) -2

Note:- &&: Logical AND: The logical AND (&&) operator returns the Boolean value true (or 1) if both operands are true and returns false (or 0) otherwise.

&: bitwise AND: The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

What will be the output of the following pseudocode?

Integer a,b,c,d

Set a=12, b=3,c=0,d=0

while ($2*a \geq 5$)

 while($b \leq 5$)

 b=b+2

 d=d+1

 end while

 a=a-5

 c=c+1

End while

Print c,d



INNATE TALENT
TRANSFORMING FUTURE

- a) 3, 2
- b) 2, 2
- c) Infinite loop
- d) 1, 2



What will be the output of the following pseudocode?

Integer a,b,c

Set a=3,b=4,c=5

if ((b-c+a)<(a-b))

 a=(a+9)&a

 b=(c&c)+a

 if ((a+6)>(c-a))

 c=(c+c)+c

End if

c=b+a

c=8+a

End if

Print a+b+c

Note:- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



What will be the output of the following pseudocode?

Integer a,b,c

Set a=2,b=7,c=4

a=(c&b)^a

if ((c+5)<(5+c)

 c=(c+c)+b

 b=(10+3)^b

 c=(b^a)^a

a) 20

b) 16

c) 17

d) 24

End if

Print a+b+c



What will be the output of the following pseudocode?

Integer a[5], b[5], c[5], k, l

Set a[5] = { 3,5,7,9,11}

Set b[5] = {2,4,6,8,10}

for (each k from 0 to 4)

 c[k] = a[k] + b[k]

end for

for (each l from 0 to 4)

Print c[l]

end for

- 
- a) 1 1 1 1 1
 - b) 5 9 13 17 21
 - c) 6 8 14 18 22
 - d) None of the mentioned options

What will be the output of the following pseudocode?

Integer a,b,c

Set a=1,b=4,c=8

if ($b > c$ OR $(a+b) < (b-a)$)

$a = (7+10)+a$

$b = (8+5)+a$

End if

Print a+b+c

- a) 8
- b) 17
- c) 26
- d) 13



What will be the output of the following pseudocode?

Integer j,m

Set m=1

Integer a[4]={9,1,3,4}

if(a[0]>a[1])

 m=m+a[3]+a[2]-a[1]-a[0]

End if

Print m

- a) 5
- b) 9
- c) -3
- d) -2



What will be the output of the following pseudocode?

Integer a,b,c,z

Set a=10, b=20, z=1

if((a>>2) > (b>>1))

 z=z+1

end if

if((a>>1) < (b>>2))

 z=z+1

end if

Print z



- a) None of the options
- b) 1
- c) 3
- d) 15



What will be the output of the following pseudocode?

Integer a,b,c

Set a=1,b=8,c=4

if ($1 > a$ OR $(c+a) < (a-c)$)

 c=7+b

 a=5^a

End if

Print a+b+c

- a) 16
- b) 22
- c) 12
- d) 13



Note:- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



What will be the output of the following pseudocode?

Integer array1[6], p,j,q

Set p=3

Set array1[6]={ 3,6,10,12,23,33}

for (each j from 0 to 5)

 if([(array1[j] MOD P) EQUALS 0])

 p=array1[j]-p*3

 end if

q=p+array1[j]-3

end for

Print q

[Note:- MOD finds the remainder after the division of one number by another. For example, the expression "5 MOD 2" would evaluate to 1 because 5 divided by 2 leaves a quotient of 2 and remainder of 1.]

- a) 34
- b) 44
- c) 54
- d) 64

What will be the output of the following pseudocode for a = 0, b = 7, and c = 9?

```
Integer funn(Integer a, Integer b, Integer c)
    a=(b+11)+b
    if (9>c)
        b=(a+c)+a
        a=c&a
    End if
    return a+b+c
End function funn()
```

- a) 41
- b) 44
- c) 47
- d) 38



What will be the output of the following pseudocode?

Integer a,b,c

Set a=5,b=6,c=4

b=(c+6)+c

if(a>b OR (c+b)<(8-c))

 b=9&b

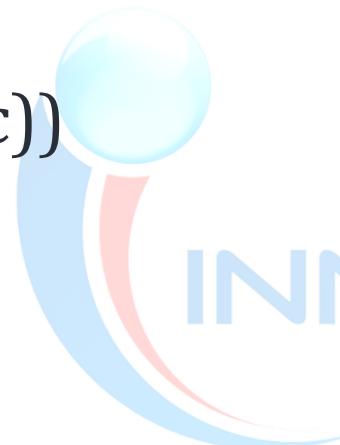
Else

 a=(a+8)+a

End if

Print a+b+c

Note:-&: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



- a) 10
- b) 28
- c) 36
- d) 39



What will be the output of the following pseudocode if a is 10?

Integer fun(Integer a)

 if (a EQUALS 0)

 return 0

 otherwise if (a EQUALS 1)

 return 1

 otherwise

 return (a*(a-1)+fun(a-3))

End function fun()

a) 145

b) 121

c) None of the options

d) 140



What will be the output of the following pseudocode?

Integer a,b,c,d,e

Set a=4,b=12,c=41

while (a+b < c)

 d=d+a+b+c

 e=d/3

 a=a+5

 b=b+5

end while

Print e



- a) 3
- b) 67
- c) 111
- d) None of the options



What will be the output of the following pseudocode?

Integer a,b,c

Set a=0,b=3,c=5

for (each c from 4 to 7)

 if((b-a+c)>(c+b))
 continue

 End if

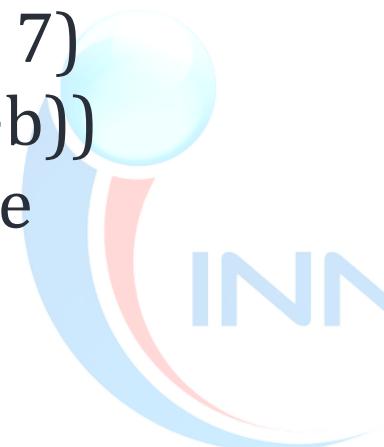
 b=a+c

 b=7+b

End for

Print a+b

- a) 21
- b) 9
- c) 14
- d) 24



Note: Continue: When a continue statement is encountered inside a loop, the control jumps to the beginning of the loop for skipping the execution of statements inside the body of the loop for the current iteration.



What will be the output of the following pseudocode?

Integer a,b,c

Set a=3,b=2,c=7

for (each c from 5 to 9)

 b=b+c

End for

a=(5+10)+a

c=(12+10)^c

for (each c from 5 to 6)

 a=(c+b)+b

 b=(a^9)+b

End for

Print a+b

Note: $^$ is the bitwise exclusive OR operator that compares each bits of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.

- a) 536
- b) 540
- c) 547
- d) 541

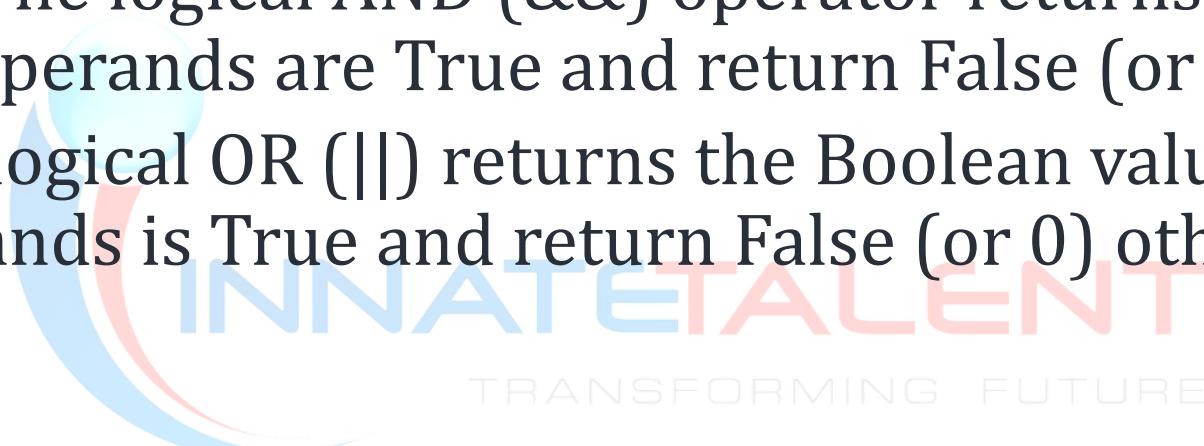


What will be the output of the following pseudocode?

Note:-

&& : Logical AND - The logical AND (&&) operator returns the Boolean value True (or 1) if both operands are True and return False (or 0) otherwise.

||: Logical OR - The logical OR (||) returns the Boolean value True (or 1) if either or both operands is True and return False (or 0) otherwise.



Set a=1, b=0,c=6,d=7

for (each i from 0 to 3)

 if (a||b||(c && d))

 print a++

 end if

 if (a equals 2)

 print a++

 end if

 if (a equals 1)

 jump out of the loop

 end if

end for

print "journey"



a)

1
2
journey

b)

1
2
3
4
5

c)

0
1
2
3
4
journey

d) None of these



What will be the output of the following pseudocode?

Integer a[],k,t,m

Set a[]={25,20,30,18,17}

Set t=0

for (each k from 0 to 4)

 t=t+a[k]

 if(t mod 2 EQUALS 1)

 Print True

 else

 Print False

 end if

end for

m=t/5

Print m



- a) true true true true false
 22
- b) false true true true false
 20
- c) true false true true false
 15
- d) true false true true false
 20

What will be the output of the following pseudocode?

Integer a,b,c

Set a=4,b=5,c=9

b=(c+6)+c

if((b^c^a)<(a^b))

 b=(3+12)+c

End if

Print a+b+c

- a) 31
- b) 20
- c) 24
- d) 37



Note:&: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



What will be the output of the following pseudocode for a = 5, b = 2, and c = 8?

Integer funn(Integer a, Integer b, Integer c)

for (each c from 5 to 7)

a=(b+b)^b

a=9+b

End for

for (each c from 4 to 6)

b=(a+b)^a

End for

return a+b

- a) 64
- b) 54
- c) 67
- d) 57

Note:- ^ is the bitwise exclusive OR operator that compares each bits of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.

What will be the output of the following pseudocode for a=3, b=1,c=7?

Note:- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.[^] is the bitwise exclusive OR operator that compares each bits of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.

Integer funn(Integer a, Integer b, Integer c)

c=(3¹)+a

b=3&c

b=(a+7)¹

if ((a^c)³)<(a^b)¹)

b=a+c

c=(1+3)+a

End if

return a+b+c

- a) 9
- b) 18
- c) 11
- d) 7



What will be the output of the following pseudocode?

Note:- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.
^ is the bitwise exclusive OR operator that compares each bits of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.

Integer a,b,c

Set a=2,b=4,c=6

b=(c^b)&b

b=(b+1)+c

b=(c+11)+b

c=(8+11)&a

c=(c^12)+a

Print a+b+c



- a) 46
- b) 50
- c) 42
- d) 54



What will be the output of the following pseudocode?

Integer a,b,c

set a= 0, b= 5, c=12

if (3<c)

a= 10 & c

end if

if ((c - a + b) > (b - c))

a= (a + 6) + c

c = (a = a) & b

end if

print a + b + c



- a) 32
- b) 40
- c) 35
- d) 50



What will be the output of the following pseudocode?

Integer a,b,count,count1

Set a=1, b=1

while(a<=5)

b=1

while(b<=5)

b=b+1

count1 = count1 + 1

end while

a= a + 1

count = count +1

End while

Print count, count1



- a) count=5 count1=25
- b) count=45 count1=25
- c) count=50 count1=5
- d) count=50 count1=25

What will be the output of the following pseudocode?

Integer l,k,m, a[5]

Set l=5

Set a[5] = { 3,4,6,16,7}

for (each k from 0 to 4)

 if(l<a[k])

 l=a[k]

 end if

m=l+a[k]

end for

print m

- a) 17
- b) 14
- c) 23
- d) None of the options



What will be the output of the following pseudocode for x=3 and y=4?

```
integer fun(int x, int y)
```

```
if(x>0)
```

```
    fun(x-1,y+1);
```

```
End if
```

```
Print y
```

```
End function fun()
```

a) 8 5 4 2

b) 7 6 5 4

c) 2 0 1 4

d) 5 0 3 4



What will be the output of the following pseudocode?

Integer a, b, c

set a= 7, b= 2, c= 8

b = (b&b) + b

a= (5 & 11) + a

c= c

print a + b + c

a) 30

b) 20

c) 15

d) 22



What will be the output of the following pseudocode?

integer a, b, c

set a= -3, b = -2

if(b - 2 < b)

for (each c from 1 - 1 to 2 - 1)

a= a + 1

end for

end if

print a +b

- a) -4
- b) 3
- c) 4
- d) -3



What will be the output of the following pseudocode if n=40 and LIMIT=100 ?

```
Integer fun2(Integer n);
if(n < +0)
return 1;
if(n > LIMIT)
return 2;
Print n
fun2(2*n);
Print n
End function fun2()
```



- a) 10 20 20 10
- b) 20 40 40 20
- c) 40 80 80 40
- d) 80 120 120 80

Which one of the following gets generated by the given pseudocode for input n=5?

```
function(input n)
```

```
{
```

```
    if (n < 2)
```

```
        return n;
```

```
    else return function (n-1) + function(n-2);
```

```
}
```

```
a) 5
```

```
b) 4
```

```
c) 3
```

```
d) 1
```



INNATE TALENT

TRANSFORMING FUTURE



What will be the output of the following pseudocode for $a = 4, b = 1$?

Integer funn(Integer a, Integer b)

 if ($a > b \&\& b = a > 0$)

 return $b + \text{funn}(a - b + a + a, b - b - b + a)$

 End if

 if ($1 > b \& a$)

 return $a - b$

 End if

return a

Note:- $\&\&$: Logical AND - The logical AND ($\&\&$) operator returns the Boolean value true (or 1) if both operands are true and return false (or 0) otherwise.

$\&$: bitwise AND - The bitwise AND operator ($\&$) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

- a) 0
- b) 14
- c) None of the option
- d) 5



What will be the output of the following pseudocode?

Integer a,b,c

Set a=0

for (each b from 0 to 10)

 a=a+b

 if (a MOD 4 EQUALS 0)

 Print "True"

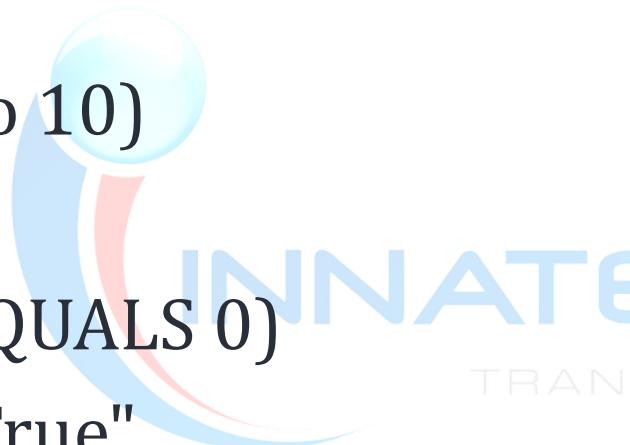
 Jump out of the loop

 end if

end for

Print b

- a) 0
- b) 0
- c) 1
- c) True
- d) 0
- d) None of the options



What will be the output of the following pseudocode?

Input f = 6,g = 9 and set sum = 0

Integer n

if (g > f)

for(n=f; n<g; n=n+1)

sum=sum+n

End of loop

else

print Error messages

print sum

- a) 21
- b) 15
- c) 9
- d) 2



What will be the output of the following pseudocode?

Integer a,b,c

Set a=7,b=3,c=10

a=(c+a)+b

if (c&b&a)<(b&a&c)

 a=(1+2)+c

End if

Print a+b+c

- a) 44
- b) 28
- c) 37
- d) 33



What will be the output of the following pseudocode for $a = 2$, $b = 8$?

Integer funn(Integer a, Integer b)

```
    if ( $a+10 > b \text{ || } a > 20$ )
        retrun funn( $a+10, a-10$ )
```

End if

return $a+b+10$

- a) 11
- b) 14
- c) 24
- d) Infinite recursive function



What will be the output of the following pseudocode?

Integer p,q,r

Set p=1, q=3, r=8

p=3^1

if((r^3)<8 && (4^6)<r)

 q=r^q

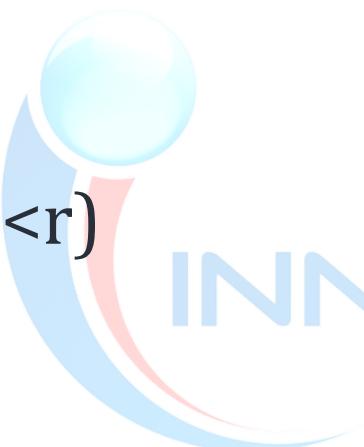
Else

 p=(p+q)+r

End if

Print p+q+r

- a) 30
- b) 25
- c) 27
- d) 24



INNATE TALENT
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What will be the output of the following pseudocode?

```
Integer p, q, r  
Set p= 6, q= 3, r= 0  
while(1)  
    r= p - q  
    p= p + r  
    if(p> 23)  
        Jump out of the loop  
    else  
        q= p - q  
    End if  
    print q  
End while
```



- a) 3 6 12
- b) 7 7 14
- c) 6 6 12
- d) 6 6 12 18

[Note: While(1): it is an infinite loop which will run till a break or similar statement is issued Explicitly]



What will be the output of the following pseudocode?

Integer a,b,c,d,e

Set a=4,b=12,c=41,d=0

while (a+b < c)

 d=d+a+b+c

 e=d/3

 a=a+5

 b=b+5

end while

Print e



- a) 3
- b) 67
- c) 111
- d) None of the options



What will be the output of the following pseudocode?

integer j,m

set m=0

integer a[4]={10,11,3,2}

for (each j from m to m+3)

if (j> 0)

a[j]= a[j-1] + 2

end if

end for

m= a[0] + a[2] + a[1]

print m

- a) 52
- b) 29
- c) 41
- d) 36



What will be the output of the following pseudocode for a=9,b=2?

Integer funn(Integer a, Integer b)

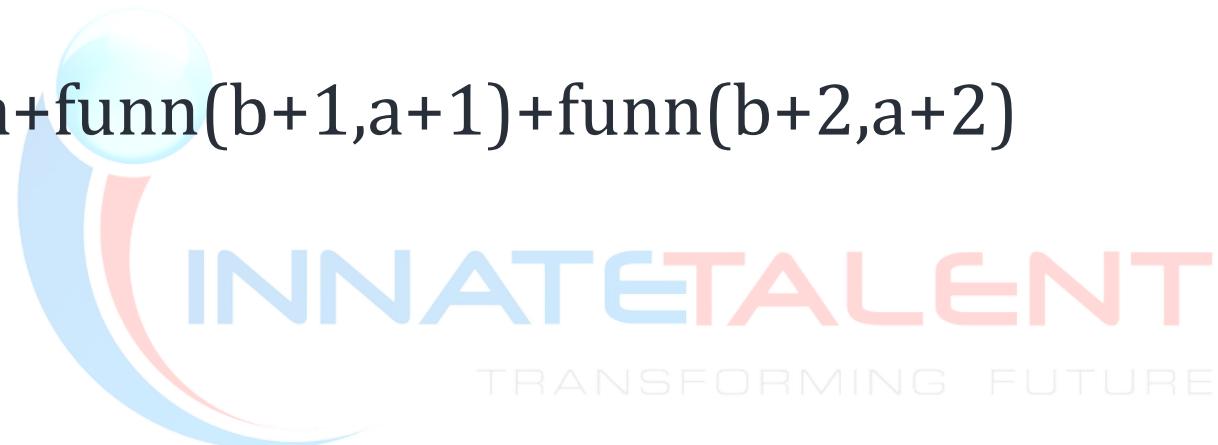
 if (b < a)

 return a + funn(b+1,a+1) + funn(b+2,a+2)

 End if

 return b

- a) 37
- b) 27
- c) 41
- d) 30



What will be the output of the following pseudocode for c=1?

Integer fun(Integer c)

 Print c

 if(c<3)

 c=c+2

 fun(fun(c))

 end if

 return c

end function fun

- a) 1
3
- b) 1
3
3
3
- c) 3
- d) None of the options



What will be the output of the following pseudocode?

set p=1, q=1

Integer fun (integer p, integer q)

if(q ^ 2 > p ^ 3)

p= q ^ 2

else

q = p & 2

end if

return p ^ q

end function fun ()

- a) 3
- b) 8
- c) 2
- d) 1



What will be the output of the following pseudocode?

integer k, p

set k= 56

p = k + 8 - 78 / 8 * 4/7 - 5/ 2

if (p)

print "hello "

else

print " bye"

end if

- 
- a) bye
 - b) hello
 - c) hello bye
 - d) none of the options

[Note: If (X) gets executed if the value inside if(), ie, x is not zero].



What will be the output of the following pseudocode?

Integer p,q,r

Set p=5, q=3, r=8

for(each r from 4 to 7)

 q=9+r

 if((4+r-p)>(p+q))

 p=(q+r)+r

 Else

 q=(r[^]q)[^]p

 End if

End for

Print p+q

Note: $^$ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bit of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



- a) 27
- b) 22
- c) 23
- d) 29

What will be the output of the following pseudocode?

Note:

Continue; When a continue statement is encountered inside a loop, control jumps to the beginning of the loop for the next iteration, skipping the execution of statements inside the body of the loop for the current iteration.

Bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Integer pp, qq, rr

Set pp=1, qq=4, rr=8

for (each rr from 3 to 6)

 qq= rr&pp

 if((rr+qq)>(pp-rr))

 continue

 Else

 rr=(9+4)+pp

 pp= qq+rr

 End if

End for

Print pp+qq

- a) 4
- b) 1
- c) 15
- d) -1



What will be the output of the following pseudocode?

Integer a,b,c

Set a=8,b=6,c=8

c=b+b

a=(a+c)&c

a=(2&5)+a

b=10+b

Print a+b+c

- a) 32
- b) 37
- c) 25
- d) 42



Note:- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



What will be the output of the following pseudocode for the input pqr?

```
fun(char a )  
    if (a[0] EQUALS NULL)  
        Return  
    end if  
    fun(a + 1)  
    fun(a + 1)  
    Print (a[0])  
end function fun
```



- a) rrqrrqp
- b) ppqqr
- c) rqppqr
- d) pqrrqrr

Note: Here, NULL means the end of the string.



What will be the output of the following pseudocode?

Integer j, m

set m= 1

integer a[4] = { 1, 1, 1, 2}

a[2]= a[1] - a[2] + a[3]

a[3] = a[2]

m= a[3]

print m

- a) -6
- b) 16
- c) 2
- d) 3



What will be the output of the following pseudocode for p = 4, q = 4?

Integer funn (integer p, integer q)

if (p - q < 1)

return funn (5,1)

end if

return p & q

end function funn ()

- a) 4
- b) 1
- c) -3
- d) 7



[Note- & bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit

of the second operand if both bits are 1 the corresponding result bit is set to 1. otherwise, the corresponding result bit is set to 0]



What will be the output of the following pseudocode?

Integer a,b,c

Set a=2,b=4,c=6

b=(c^b)&b

b=(b+1)+c

b=(c+11)+b

c=(8+11)&a

c=(c^12)+a

Print a+b+c



- a) 46
- b) 50
- c) 42
- d) 54



What will be the output of the following pseudocode?

Integer n,j,k,c,t,b,array[5]

Set n=7, c=1

Set array[5]={1,6,7,11,13}

b=array[0]

for (each k from 1 to n-3)

 b=b^array[k]

end for

for (each k from 2 to n-1)

 c=c^k

Print c

Note:- ^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

- a) 7
- b) 4
- c) 5
- d) None of the options



What will be the output of the following pseudocode when p=-5,q=4?

Integer funn(Integer p, Integer q)

if(p>1)

 return 1

End if

if(q>0 || p>0)

 return funn(0, q-1)+funn(p+2,0)

Else

 return p+1

End if

return q

- a) 8
- b) 5
- c) 1
- d) 2



Note:-||: Logical operator OR - The Logical OR operator (||) returns the Boolean value TRUE(or 1)if either or both operands is TRUE and returns FALSE (or 0) otherwise.



What will be the output of the following pseudocode?

integer array1[6],p,j,q

set p=3

set array1[6]={3, 6, 10, 12, 23, 33}

for (each j from 0 to 5)

if ((array1 [j] MOD p) EQUALS 0)

p = array1[j] - (p * 3)

end if

q= p+ array1[j] - 3

end for

print q

- a) 64
- b) 44
- c) 34
- d) 54

[Note: MOD finds the remainder after the division of one number by another. For example, the expression "5 MOD" would evaluate to 1 because 5 leaves a quotient of 2 and a remainder of 1]

What will be the output of the following pseudocode for a= 22?

```
integer compact(integer a)
if( a <= 45)
    compact( compact (compact (a * 5 + 1)))
end if
return a*2
end function compact ()
```



- a) 22
- b) 45
- c) 56
- d) 44



What will be the output of the following pseudocode when a is 10?

Integer fun(Integer a)

 if (a EQUALS 0)

 return 0

 otherwise if (a EQUALS 1)

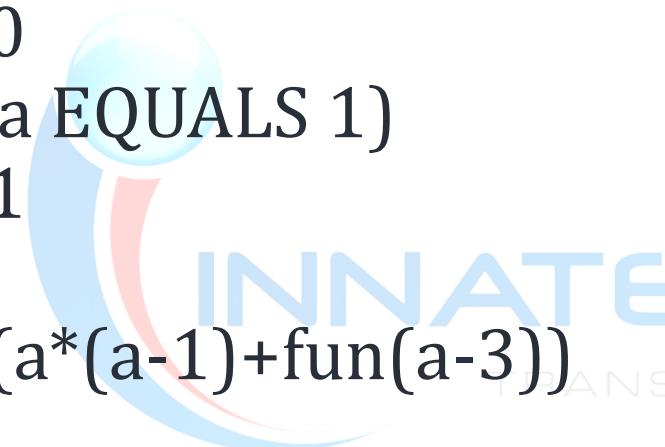
 return 1

 otherwise

 return (a*(a-1)+fun(a-3))

End function fun()

- a) 145
- b) 121
- c) 140
- d) None of the options



What will be the output of the following pseudocode?

Integer a[5], b[5], c[5], k, l

Set a[5] = { 3,5,7,9,11}

Set b[5] = {2,4,6,8,10}

for (each k from 0 to 4)

 c[k] = a[k] + b[k]

end for

for (each l from 0 to 4)

Print c[l]

end for

- a) 1 1 1 1 1
- b) 5 9 13 17 21
- c) 6 8 14 18 22
- d) None of the options



What will be the output of the following pseudocode?

Integer a, b, c

Set a=5, b=7, c=7

for(each c from 3 to 5)

 if((a+b+c)>(c-a))

 b=(a&c)+c

 a=c+c

 End if

 a=(b^c)+c

End for

Print a+b

- a) 24
- b) 26
- c) 28
- d) 30



What will be the output of the following pseudocode?

Integer p , q

Set q = 280,p=0

for (each i from 1 to 4)

 q = q / 10

 p = p + q + 2

end for

Print p

a) 32

b) 288

c) 12

d) 38



What will be the output of the following pseudocode?

Integer p,q,r

Set p=3, q=7, r=8

p=9+r

if((p+r)<(r-q))

 q=(q+r)+p

End if

Print p+q+r

a) 26

b) 32

c) 37

d) 46



Which sorting algorithm is implemented in the below pseudocode?

```
for j = 2 to n
```

```
    key ← A [j]
```

```
    j ← i - 1
```

```
    while i > 0 and A[i] > key
```

```
        A[i+1] ← A[i]
```

```
        i ← i - 1
```

```
    A[j+1] ← key
```



- a) Insertion sort
- b) Shell sort
- c) Selection sort
- d) Bubble sort

What will be the output of the following pseudocode?

Integer p[10] = {12, 16, 24, 2, 18, 20}

Integer a, b, c, d, e

Set b = 0, e = 2

for (c from 1 to 11) and Increment c by 2 for each iteration

 b = b + p[c+1]

end for

d = (b+e) MOD 2

Print d

- a) 33
- b) 14
- c) 0
- d) 1



Note: MOD finds the remainder after the division of one number by another. For example, the expression because 5 divided by 2 leaves a quotient of 2 and a remainder of 1.



What will be the output of the following pseudocode?

Note-&: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bit of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Integer pp, qq, rr

Set pp = 7, qq = 7, rr

for (each rr from 3 to 5)

 pp = qq + pp

 if ((3-rr-qq) > (qq-pp))

 pp= 3 + rr

 pp= (qq^pp)& pp

 Enf if

Enf for

Print pp + qq

- a) 24
- b) 16
- c) 12
- d) 14



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What will be the output of the following pseudocode?

Integer a,b,c

Set a=5,b=6,c=4

b=(c+6)+c

if(a>b OR (c+b)<(8-c))

 b=9&b

Else

 a=(a+8)+a

End if

Print a+b+c

Note: &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corresponding bit of the second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



- a) 10
- b) 28
- c) 36
- d) 35

What will be the output of the following pseudocode for a=1, b=3, c=5?

Integer funn(Integer a, Integer b, Integer c)

for(each c from 5 to 3)

 b = 11+c

 if((b+5)>(c-b))

 a=(5+5)&c

 End if

End for

return a + b

Note: ^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bit of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.



What will be the output of the following pseudocode for $x = 45$?

Integer fun (Integer x)

```
if ((x MOD 6) MOD 2 > 0)
```

```
    return x / 9
```

```
else
```

```
    return fun (x / 9)
```

```
end if
```

```
end function fun ()
```

- 
- a) 1
 - b) 0
 - c) 5
 - d) Results in an infinite loop

Note: mod finds the remainder after the division of one number by another. For example, the expression "5 mod 2" would evaluate to 1 because 5 divided by 2 leaves a quotient of 2 and remainder of 1.

What will be the output of the following pseudocode?

Integer array1[6], p,j,q

Set p=3

Set array1[6]={ 3,6,10,12,23,33}

for (each j from 0 to 5)

 if((array1[j] MOD p) EQUALS 0)

 p=array1[j]-p*3

 end if

q=p+array1[j]-3

end for

Print q

- a) 54
- b) 64
- c) 44
- d) 34

What will be the output of the following pseudocode?

Note: Continue; When a continue statement is encountered inside a loop, control jumps to the beginning of the loop for the next iteration, skipping the execution of statements inside the body of the loop for the current iteration.

\wedge is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bit of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0.

Integer a, b, c

Set a=5, b=6, c=10

for(each c from 2 to 0)

 if (a < c)

 continue

 End if

 b= (c+c)^a

 b= 9 +a

End for

Print a+b

- a) 20
- b) 27
- c) 30
- d) 19



What will be the output of the following pseudocode?

Integer a,b,c

Set a=7,b=7,c=9

if ((a^b^c)>(b^a))

 c=b&b

End if

Print a+b+c

- a) 23
- b) 21
- c) 24
- d) 27



What will be the output of the following pseudocode for a=3, b=1, c=7?

Integer funn(Integer a, Integer b, Integer c)

c=(3¹)+a

b=3&c

b=(a+7)^b

if ((a^c)³)<(a^b)¹

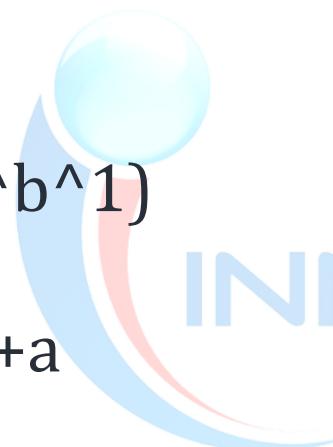
 b=a+c

 c=(1+3)+a

End if

return a+b+c

- a) 16
- b) 18
- c) 15
- d) 17



What will be the output of the following pseudocode?

Integer a,b,c

Set a=2,b=7,c=4

a=(c&b)^a

if ((c+5)<(5+c)

 c=(c+c)+b

 b=(10+3)^b

 c=(b^a)^a

End if

Print a+b+c



- a) 20
- b) 16
- c) 17
- d) 24



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