26.

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| --- |
| *Soal* |
| soal 26.jpg |
| *Script yang telah diubah* |
| **uses crt;**  **var**  **N, hasil : integer;**  **procedure solve(x : integer);**  **begin**  **if (x>1) then**  **begin**  **hasil := hasil+1;**  **solve(x div 2 + x mod 2);**  **writeln('x = ',x);**  **end;**  **end;**  **begin**  **repeat**  **readln(N);**  **hasil := 0;**  **solve(N);**  **writeln(hasil);**  **readln;**  **until (N=0);**  **end.** |
| *Output* |
| 26.jpg |
| *Penjelasan* |
| Input 77   * input 77 ((77 div 2)+(77 mod 2)) = 38+1 = 39 karna masih lebih dari angka 1 maka di proses lagi * input 39 ((39 div 2)+(39 mod 2)) = 19+1 = 20 karna masih lebih dari angka 1 maka di proses lagi * input 20 ((20 div 2)+(20 mod 2)) = 10+0 = 10 karna masih lebih dari angka 1 maka di proses lagi * input 10 (10 div 2)+(10 mod 2)) = 5+0 = 5 karna masih lebih dari angka 1 maka di proses lagi * input 5 ((5 div 2)+(5 mod 2)) = 2+1 = 3 karna masih lebih dari angka 1 maka di proses lagi * input 3 ((3 div 2)+(3 mod 2)) = 1+1 = 2 karna masih lebih dari angka 1 maka di proses lagi * input 2 ((2 div 2)+(2 mod 2)) = 1+0 = 1 karna tidak lebih dari angka 1 maka proses di hentikan |

27.

|  |
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| *Soal* |
| soal 27.jpg |
| *Script yang telah diubah* |
| **uses crt;**  **var**  **i : integer;**  **base, kata, kalimat : string;**  **begin**  **base := 'QWERTYUIOPLKJHGFDSAZXCVBNM';**  **kata := '';**  **readln(kalimat);**  **writeln(' ');**  **for i := length(kalimat) downto 1 do**  **begin**  **write(kalimat[i]);**  **if pos (kalimat[i], base) > 0 then**  **kata := kata + kalimat[i];**  **end;**  **writeln(' ');**  **writeln(' ');**  **writeln(kata);**  **readln;**  **end.** |
| *Output* |
| 27.jpg |
| *Penjelasan* |
| **input "s4yA-BuK4N+oRanG aLaY!?"**  **for i := length(kalimat) downto 1 do => "?!YaLa GnaRo+N4KuB-Ay4s"**  **if pos (kalimat[i], base) > 0 then => true**  **kata := kata + kalimat[i] => kata := " " + "YLGRNKBA"**  **kata := YLGRNKBA** |

28.

|  |
| --- |
| *Soal* |
| soal 28.jpg |
| *Script yang telah diubah* |
| **uses crt;**  **var**  **n : integer ;**  **boki : integer ;**  **function kibo (n: integer):integer;**  **begin**  **if (n = 2) or (n=1) or (n=0) then kibo := n**  **else kibo := kibo(n-1) + kibo(n-3);**  **writeln('Kibo = ',n);**  **end;**  **begin**  **repeat**  **read (n);**  **boki := kibo(n);**  **writeln (boki);**  **readkey;**  **until n =0;**  **end.** |
| *Output* |
| 28.jpg |
| *Penjelasan* |
| **Input kibo 7**  **If (n = 2) or (n=1) or (n=0) then then kibo := 0 => else**  **(N = 7)**  **Kibo := kibo(6)+kibo(4)=10**  **(n=6) (n=4)**  **((kibo5)+(kibo3))=8 ((kibo3)+(kibo1))=4**  **(n=5) (n=3) (n=3) (n=1)**  **((kibo4)+(kibo2))=6 ((kibo2)+(kibo0))=2 ((kibo2)+(kibo0))=2 (kibo1)**  **(n=4) ( n=2) (n=2) (n=0) ( n=2) (n=0) ( n=1)**  **(((kibo3)+(kibo 1))=4 (kibo 2) (kibo 2) (kibo 0) (kibo 2) (kibo 0) (kibo1)**  **(n=3) (n=1) ( n=2) ( n=2) (n=0) ( n=2) (n=0) ( n=1)**  **((kibo 2)+(kibo 0))=2 (kibo 1) (kibo 2) (kibo 2) (kibo 0) (kibo 2) (kibo 0) (kibo1)**  **Jadi (Kibo 3) diproses sebanyak 3 kali** |

29.

|  |
| --- |
| *Soal* |
| soal 29.jpg |
| *Script yang telah diubah* |
| **uses crt;**  **var**  **we : longint;**  **z : array[1..15] of longint;**  **function f(x:longint; y : longint): longint;**  **var**  **a,b : longint;**  **begin**  **if (x=y) then**  **f := z[y]**  **else begin**  **a := f(x, (x+y) div 2);**  **b := f((x+y) div 2+1,y);**  **if (a<b) then f := a**  **else f := b**  **end**  **end;**  **begin**  **z[1] := 64;**  **z[2] := 19;**  **z[3] := 56;**  **z[4] := 67;**  **z[5] := 66;**  **z[6] := 82;**  **z[7] := 31;**  **z[8] := 20;**  **z[9] := 67;**  **z[10] := 10;**  **z[11] := 94;**  **z[12] := 100;**  **z[13] := 57;**  **z[14] := 14;**  **z[15] := 86;**  **we := f(3,11);**  **writeln(we);**  **readkey;**  **end.** |
| *Output* |
| 29.jpg |
| *Penjelasan* |
| **(f = 3,11)**  **a := f(3,(3+11) / 2) => (f=3,7)**  **b := f((3+11) / 2+1,y) => (f=8,11)**  **a<b => (f=3,7)**  **(f = 3,7)**  **a := f(3,(3+7) / 2) => (f=3,5)**  **b := f((3+7) /2+1,7) => (f=6,7)**  **a<b => (f=3,5)**  **(f=3,5)**  **a := f(3,(3+5) / 2) => (f=3,4)**  **b := f((3+5) / 2+1,5) => (f=5,5)**  **a<b => f(3,4)**  **(f=3,4)**  **a := f(3,(3+4) / 2) => (f=3,3) => 56**  **b := f((3+4) /2+1,4) => (f=4,4) => 67**  **a<b => f := a => 56<67 => f(3,3)**  **f(3,3) => z[3] => 56**  **kembali ke atas**  **a := f(3,4) => 56**  **b := f(5,5) => z[5] => 66**  **55<56 => f := a**  **f(3,5) => 56**  **-------------------------------**  **a := f(3,5) := 56**  **b := f(6,7) := f(7,7) := z[7] => 31**  **56<31 => f:= b**  **f(3,7) := 31**  **------------------------------**  **a := f(3,7) => 31**  **b := f(8,11) => f(10,11)**  **b := f(10,10) => z[10] => 10**  **31<10 => f := b**  **f(3,11) => 10** |

30 dan 31

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| --- |
| *Soal* |
| soal 30 dan 31 bag 1.jpgsoal 30 dan 31 bag 2.jpg |
| *Script yang telah diubah* |
| **uses crt;**  **var**  **s : string;**  **cr,cl : integer;**  **procedure right (l,r : integer);**  **forward;**  **procedure swap(l,r : integer);**  **var**  **c : char;**  **begin**  **if (l>=1) and (r<=length(s)) then**  **begin**  **c := s[l];**  **s[l] := s[r];**  **s[r] := c;**  **writeln(s);**  **writeln('cr = ',cl);**  **writeln('cr = ',cr);**  **end;**  **end;**  **procedure left (l,r : integer);**  **begin**  **inc(cl);**  **swap(l,r);**  **if (r<length(s)) then**  **right(l,r+1);**  **end;**  **procedure right (l,r : integer);**  **begin**  **inc(cr);**  **swap(l,r);**  **if (l>1) then**  **left(l-1,r);**  **end;**  **begin**  **s:= 'gogetgold';**  **left (9,1);**  **writeln(s);**  **writeln(cl,',',cr);**  **readkey;**  **end.** |
| *Output* |
| 30.  30.jpg  31.  31.jpg |
| *Penjelasan* |
| left (9,1)  inc(cl) => cl := 0+1 = 1  cr := 0  swap(9,1)  if (l>=1) and (r<=length(s)) => if (9>=1) and (1<=9) => true  c := s[l] => c := s[9]  s[l] := s[r] => s[9] := s[1] = 'gogetgold' => 'dogetgolg'  s[r] := c => s[1] := c  if (r<length(s)) => if (1<9) then  right(l,r+1) => right(9,2)  right(9,2)  => cl := 1  inc(cr) => cr := 0+1 = 1  swap(9,2)  if (9>=1) and (2<=9) => true  c := s[9]  s[9] := s[2] = 'dogetgolg' => 'dggetgolo'  s[2] := c  if (l>1) => if (9>1) => true  left(l-1,r) => left(8,2)  left(8,2)  inc(cl) => cl := 1+1 = 2  cr := 1  swap(8,2)  if (8>=1) and (2<=9) => true  c := s[8]  s[8] := s[2] = 'dggetgolo' => 'dlgetgogo'  s[2] := c  if (2<9) then  right(8,3)  right(8,3)  => cl := 2  inc(cr) => cr := 1+1 = 2  swap(8,3)  if (8>=1) and (3<=9) => true  c := s[8]  s[8] := s[3] = 'dlgetgogo' => 'dlgetgogo'  s[3] := c  if (l>1) => if (8>1) => true  left(l-1,r) => left(7,3)  left(7,3)  inc(cl) => cl := 2+1 = 3  cr := 2  swap(7,3)  if (7>=1) and (3<=9) => true  c := s[7]  s[7] := s[3] = 'dlgetgogo' => 'dloetgggo'  s[3] := c  if (3<9) then  right(7,4)  right(7,4)  => cl := 3  inc(cr) => cr := 2+1 = 3  swap(7,4)  if (7>=1) and (4<=9) => true  c := s[7]  s[7] := s[4] = 'dloetgggo' => 'dlogtgego'  s[4] := c  if (l>1) => if (7>1) => true  left(l-1,r) => left(6,4)  left(6,4) => inc(cl) := 3+1 = 4  cr := 3  'dlogtgego'  right(6,5) => cl := 4  inc(cr) := 3+1 = 4  'dloggtego'  left(5,5) => inc(cl) := 4+1 = 5  cr := 4  'dloggtego'  right(5,6) => cl := 5  inc(cr) := 4+1 = 5  'dlogtgego'  left(4,6) => inc(cl) := 5+1 = 6  cr := 5  'dlogtgego'  right(4,7) => cl := 6  inc(cr) := 5+1 = 6  'dloetgggo'  left(3,7) => inc(cl) := 6+1 = 7  cr := 6  'dlgetgogo'  right(3,8) => cl := 7  inc(cr) := 6+1 = 7  'dlgetgogo'  left(2,8) => inc(cl) := 7+1 = 8  cr := 7  'dggetgolo'  right(2,9) => cl := 8  inc(cr) := 7+1 = 8  'dogetgolg'  left(1,9) => inc(cl) := 8+1 = 9  cr := 8  'gogetgold'  jadi hasil dari left(9,1) adalah :  (s) : 'gogetgold'  cl : 9 cr : 8  31.  left(5,5)  prosesnya sama seperti no 30, dan hasil dari left(5,5) adalah :  (s) : 'tdlogegog'  (cl) : 5 (cr) : 4 |

32.

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| *Soal* |
| soal 32 dan 33.jpg |
| *Script yang telah diubah* |
| **uses crt;**  **procedure tulis (n,m : integer);**  **var**  **i,j,k : integer;**  **begin**  **for i := 1 to n do**  **begin**  **for k := 1 to (n div m) do**  **for k := 1 to m do**  **writeln(i,'=>',k,'\*');**  **for j := 1 to (n mod m) do**  **writeln(i,'=> ',j,'-');**  **end;**  **end;**  **begin**  **tulis(30,30);**  **readkey**  **end.** |
| *Output* |
| Karena outputnya terlalu panjang maka saya capture hanya hasil akhirnya saja  32.  32.jpg  33.  33.jpg |
| *Penjelasan* |
| 32.  n,m => (5,5)  for k := 1 to (5 div 5) do = 1  for k := 1 to 5  \* = 5\*5 = 25  for j :+ 1 to (5 mod 5) do = 0  - = 5\*0 = 0  output  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  33.  n,m => (5,2)  for k := 1 to (5 div 2) do = 2  for k := 1 to 2  \*= 5\*2 = 10  for j := 1 to (5 mod 2) do = 1  - = 5\*1 = 5  output  \*\*-\*\*-\*\*-\*\*-\*\*- |

34 dan 35

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| --- |
| *Soal* |
| soal 34 dan 35.jpg |
| *Script yang telah diubah* |
|  |
| *Output* |
|  |
| *Penjelasan* |
|  |

36 dan 37

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| --- |
| *Soal* |
| soal 36 dan 37.jpg |
| *Script yang telah diubah* |
| **var**  **a : integer;**  **function hap (x,t : integer) : integer;**  **begin**  **writeln('x = ',x,' t = ',t);**  **writeln('if t = 1 then');**  **if t=1 then**  **writeln('hap := ',x,' mod 5')**  **else**  **writeln('hap := 5\*',x);**  **if t = 1 then**  **hap := x mod 5**  **else**  **hap := 5\*x;**  **writeln('hap = ',hap);**  **writeln(' ');**  **end;**  **function hip (x,y : integer) : integer;**  **begin**  **writeln('x = ',x,' y = ',y);**  **writeln('if x<y then');**  **if x<y then**  **writeln('hip := hip(',y,',',x,')')**  **else**  **writeln('hip := hap(',x,'1) + hap(',y,'2)');**  **writeln('');**  **if x<y then**  **hip := hip(y,x)**  **else**  **hip := hap(x,1) + hap (y,2);**  **end;**  **function hop(x,y,z : integer) : integer;**  **begin**  **writeln('x = ',x,' y = ',y,' z = ',z,'z');**  **writeln('if y>z then');**  **if x>y then**  **writeln('else if x>y then')**  **else**  **write('');**  **if y>z then**  **writeln('hop(',x,',',z,',',y,')')**  **else if x>y then**  **writeln('hop := hop (',y,',',x,',',z)**  **else**  **writeln('hop := hip(',x,',',y,') + ',z);**  **writeln(' ');**  **if y>z then**  **hop := hop(x,z,y)**  **else if x>y then**  **hop := hop (y,x,z)**  **else**  **hop := hip(x,y) + z;**  **end;**  **begin**  **a := (hop(18,3,1993));**  **writeln(a);**  **readln;**  **end.** |
| *Output* |
| 36.  36.jpg  37.  Karena outputnya panjang maka saya capture hasil akhirnya saja  37.jpg |

38.

|  |
| --- |
| *Soal* |
| soal 38.jpg |
| *Script yang telah diubah* |
| **program hahaha;**  **var**  **n,i,j , hehe : integer;**  **a, hoho : array [0..1000] of integer;**  **begin**  **repeat**  **read(n);**  **for i := 1 to n do read(a[i]);**  **for i := 1 to n do hoho[i] := 1;**  **for i := 1 to n do**  **for j := 1 to i-1 do**  **if (a[j] < a[i]) and (hoho[j] + 1>hoho[i]) then**  **hoho[i] := hoho[j]+1;**  **hehe := 0;**  **for i := 1 to n do**  **writeln('if ',hoho[i],'>',hehe, ' then hehe := ',hoho[i]);**  **for i := 1 to n do**  **if (hoho[i]>hehe) then hehe := hoho[i];**  **writeln('');**  **writeln ('hehe = ',hehe);**  **readln;**  **readln;**  **until n=0;**  **end.** |
| *Output* |
| 38.jpg |
| *Penjelasan* |
|  |

39.

|  |
| --- |
| *Soal* |
| soal 39.jpg |
| *Script yang telah diubah* |
| **var**  **i,k,j,l,m,n,o : integer;**  **begin**  **read(n);**  **for i :=1 to n do**  **begin**  **for k := i to n-1 do write(' ');**  **for j := 1 to (2\*i-1) do**  **if (i=n) or (i mod 2=1) then write ('\*')**  **else if j mod 2=1 then write('\*')**  **else write('0');**  **writeln;**  **end;**  **for l := n downto 2 do**  **begin**  **for m := l to n do write(' ');**  **for o := (2\*l-1) downto 3 do**  **if o mod 2=1 then write('\*')**  **else write('0');**  **writeln;**  **end;**  **readln;**  **readln;**  **end.** |
| *Output* |
| 39.jpg |
| *Penjelasan* |
| **n = 10**  **((i=n) or**  **(i mod 2=1) or => ('\*') (j mod 2=1)) => ('\*')**  **i else => ('0') j**  **1 \* (2\*1-1)= 1 \***  **2 0 (2\*2-1)= 3 \***  **3 \* (2\*3-1)= 5 \***  **4 0 (2\*4-1)= 7 \***  **5 \* (2\*5-1)= 9 \***  **6 0 (2\*6-1)= 11 \***  **7 \* (2\*7-1)= 13 \***  **8 0 (2\*8-1)= 15 \***  **9 \* (2\*9-1)= 17 \***  **10 \* (2\*10-1)= 19 \***  **for i := 1 to n do**  **for k := i to n-1 do write (' ')**  **for j := 1 to (2\*i-1) do**  **if (i=n) or (i mod 2=1) then write ('\*')**  **else if j mod 2=1 then write('\*')**  **else write('0');**  **l (2\*l-1) = o (o mod 2 = 1) => ('\*')**  **else => ('0')**  **10 (2\*10-1)= 19 \***  **9 (2\*9-1)= 17 \***  **8 (2\*8-1)= 15 \***  **7 (2\*7-1) = 13 \***  **6 (2\*6-1) = 11 \***  **5 (2\*5-1) = 9 \***  **4 (2\*4-1) = 7 \***  **3 (2\*3-1) = 5 \***  **2 (2\*2-1) = 3 \***  **for l := n down to 2**  **for m := l to n do write (' ')**  **for o := (2\*l-1) downto 3 do**  **if o mod 2 = 1 then write ('\*')**  **else write ('0')** |

40 dan 41

|  |
| --- |
| *Soal* |
| soal 40 dan 41.jpg |
| *Script yang telah diubah* |
| **var**  **a : integer;**  **function mencari (n : integer): integer;**  **var**  **i, j, z : integer;**  **begin**  **mencari := 0;**  **for i := 1 to n do**  **begin**  **j := 1;**  **z := 0;**  **while (j <= i) do**  **begin**  **if (i mod j = 0) then inc(z);**  **write (' z =',z);**  **inc (j);**  **writeln (' j =',j);**  **end;**  **if (z mod 2 <> 0) then**  **mencari := mencari+1;**  **writeln ('mencari =',mencari);**  **end;**  **end;**  **begin**  **a := mencari(50);**  **writeln(a);**  **readln;**  **end.** |
| *Output* |
| 40.  Karena outputnya panjang maka saya capture bagian hasil akhirnya.  40.jpg  41.  41.jpg |
| *Penjelasan* |
| **40 dan 41**  **hasil simple nya, n dapat di bagi berapa saja, dan ada berapa angka, nah jumlah dari banyak nya yang dapat di bagi n tersebut bila hasilnya ganjil maka hasilnya sama persis, dan jika hasilnya genap maka hasil tersebut di kurang 1.**  **mencari := 0**  **j := 1**  **z := 0**  **for i := 1 to n**  **1. while (j <= i) => while (1 <= 1)**  **if ( i mod j = 0) => (1 mod 1 = 0) true**  **=> inc(z) = z := 1**  **=> inc(j) = j := 2**  **if ( i mod j = 0) => (1 mod 2 = 0) false**  **=> if (z mod 2 <> 0) => (1 mod 2 <> 0) true => mencari + 1 = mencari := 1**  **2. while (2 <= 2)**  **if ( i mod j = 0) => (2 mod 1 = 0) true**  **=> inc(z) = z := 1**  **=> inc(j) = j := 2**  **if ( i mod j = 0) => (2 mod 2 = 0) true**  **=> inc(z) = z := 2**  **=> inc(j) = j := 3**  **=> if (z mod 2 <> 0) => (2 mod 2 <> 0) false => mencari := 1**  **3. while (4 <= 4)**  **if ( i mod j = 0) => (4 mod 1 = 0) true**  **=> inc(z) = z := 1**  **=> inc(j) = j := 2**  **if ( i mod j = 0) => (4 mod 2 = 0) true**  **=> inc(z) = z := 2**  **=> inc(j) = j := 3**  **if ( i mod j = 0) => (4 mod 3 = 0) false**  **=> inc(z) = z := 2**  **=> inc(j) = j := 4**  **if ( i mod j = 0) => (4 mod 4 = 0) true**  **=> inc(z) = z := 3**  **=> inc(j) = j := 5**  **=> if (z mod 2 <> 0) => (3 mod 2 <> 0) true => mencari := 2**  **jadi, program ini menentukan jumlah mencari bila (z mod 2 <> 0) maka mencari + 1**  **jadi,**  **=> total mencari bila (n = 50) adalah = 7**  **=> total mencari bila (n = 9000) adalah = 94** |

|  |
| --- |
| *Soal* |
| soal 42.jpg |
| *Script yang telah diubah* |
| **var**  **data1 : array[1..10] of integer;**  **data2,data3 : array[1..10] of integer;**  **i : integer;**  **begin**  **data1[1] := 3;**  **data1[2] := 9;**  **data1[3] := 2;**  **data1[4] := 2;**  **data1[5] := 1;**  **data1[6] := 5;**  **data1[7] := 7;**  **data1[8] := 5;**  **data1[9] := 5;**  **data1[10] := 8;**  **for i := 1 to 10 do**  **data2[i] := 0;**  **writeln(data2[i]);**  **for i := 1 to 10 do**  **inc(data2[data1[i]]);**  **writeln(data2[data1[i]]);**  **for i := 2 to 10 do**  **data2[i] := data2[i] + data2[i-1];**  **writeln(data2[i]);**  **for i := 10 downto 1 do**  **begin**  **data3[data2[data1[i]]] := data1[i];**  **dec(data2[data1[i]]);**  **writeln('data3 = ',data1[i]);**  **writeln('');**  **end;**  **for i := 1 to 10 do**  **write(data3[i]);**  **readln;**  **end.** |
| *Output* |
| 42.jpg |
| *Penjelasan* |
|  |

43.

|  |
| --- |
| *Soal* |
| soal 43.jpg |
| *Script yang telah diubah* |
| **var**  **i,j,x : integer;**  **begin**  **x := 0;**  **for i := 1 to 5 do begin**  **for j := 5 downto 1 do begin**  **x := x + i + j;**  **writeln (x,'= ',x,' +',i,' +',j);**  **end;**  **end;**  **writeln(x);**  **readln;**  **end.** |
| *Output* |
| 43.jpg |
| *Penjelasan* |
|  |

44 dan 45

|  |
| --- |
| *Soal* |
| soal 44 dan 45.jpg |
| *Script yang telah diubah* |
| **var**  **x,y : integer;**  **procedure abc(a : integer; var b : integer);**  **var c : integer;**  **begin**  **if not ((a=0) or (b=0)) then**  **if (a>b) then**  **begin**  **a := a mod b;**  **abc(b,a);**  **end**  **else**  **begin**  **b := b mod a;**  **abc(a,b);**  **end;**  **writeln(' A => ',a, ':= ',a,'mod',b);**  **writeln('B => ',b,' := ',b,'mod',a);**  **end;**  **begin**  **x := 219; y := 168;**  **abc(x,y);**  **readln;**  **readln;**  **end.** |
| *Output* |
| 44 dan 45  44.jpg |
| *Penjelasan* |
| 44 dan 45.  a := 219 b := 168  a>b then a b abc  219>168= true 219 mod 168 = 51 168 168,51  168>51 = true 168 mod 51 = 15 51 51,15  51>15 = true 51 mod 15 = 6 15 15,6  15>6 = true 15 mod 6 = 3 6 6,3  6>3 = true 6 mod 3 = 0 3 3,0  3>0 = true b = 0 = 3 0 |

46.

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| *Soal* |
| soal 46.jpg |
| *Script yang telah diubah* |
| **var**  **sum,i,j,n,c : integer;**  **begin**  **read(n);**  **sum := 0;**  **for i := 2 to n do**  **begin**  **c := 0;**  **j := 1;**  **while (j>0) do**  **begin**  **if (j mod 2 = 1) then c := c+1;**  **j := j div 2;**  **write(c,'+');**  **end;**  **if (c = 1) then sum := sum + 1;**  **end;**  **writeln(' = ',sum);**  **readln;**  **readln;**  **end.** |
| *Output* |
| 46.jpg |
| *Penjelasan* |
| secara simple (j\*n-1) => (1\*2013)-1 = 2012  n = 2013  for i := 2 to n do  j := 1  i := 2013 - 1 => 2012  while (1>0) do  if (1 mod 2 = 1) true => c+1;  if (c = 1) => sum+1  (sum+1) di proses sebanyak 2012 kali, jadi hasil dari sum adalah 2012 |

47.

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| *Soal* |
| soal 47.jpg |
| *Script yang telah diubah* |
| **uses crt;**  **procedure f ( x : longint; y : longint; z : longint);**  **begin**  **if (y = 0) then**  **writeln(z)**  **else**  **begin**  **writeln('if (',y,' mod 2 = 1) then');**  **if (y mod 2 = 1) then**  **writeln(z,'+',x);**  **if (y mod 2 = 1) then**  **z := z + x;**  **writeln('z = ',z);**  **writeln('');**  **writeln('f(',2\*x,',',y div 2,',',z,')');**  **f(2\*x,y div 2,z)**  **end;**  **end;**  **begin**  **f(15,97,0);**  **readln;**  **end.** |
| *Output* |
| 47.jpg |
| *Penjelasan* |
| (x,y,z) => f (15,97,0)  => if (y = 0) => false  if (y mod 2 = 1) => (97 mod 2 = 1) = true  z := 0 + 15 = 15  f(2\*15,97 div 2,z) => f(30,48,15)  => if (y = 0) => false  if (y mod 2 = 1) => (48 mod 2 = 1) = false    f(2\*x,y div 2,z) => f(2\*30,48 div 2,15) = f(60,24,15)  => if (y = 0) => false  if (y mod 2 = 1) => (24 mod 2 = 1) = false    f(2\*x,y div 2,z) => f(2\*60,24 div 2,15) = f(120,12,15)  => if (y = 0) => false  if (y mod 2 = 1) => (12 mod 2 = 1) = false    f(2\*x,y div 2,z) => f(2\*120,12 div 2,15) = f(240,6,15)  => if (y = 0) => false  if (y mod 2 = 1) => (6 mod 2 = 1) = false    f(2\*x,y div 2,z) => f(2\*240,6 div 2,15) = f(480,3,15)  => if (y = 0) => false  if (y mod 2 = 1) => (3 mod 2 = 1) = true  z := 15 + 480 = 495    f(2\*x,y div 2,z) => f(2\*480,3 div 2,495) = f(960,1,495)    => if (y = 0) => false  if (y mod 2 = 1) => (1 mod 2 = 1) = true  z := 495 + 960 = 1455    f(2\*x,y div 2,z) => f(2\*960,1 div 2,1455) = f(1920,0,1455) |

48.

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| *Soal* |
| soal 48 dan 49.jpg |
| *Script yang telah diubah* |
| **uses crt;**  **var**  **a : integer;**  **function flop(a,b:longint):longint;**  **forward;**  **function flip(a,b:longint):longint;**  **begin**  **if (a = 0) then**  **flip:=0**  **else**  **flip:=a+flop(a-1,b);**  **write('+',a);**  **end;**  **function flop(a,b:longint):longint;**  **begin**  **if (b = 0) then**  **flop:=0**  **else**  **flop:=b+flip(a,b-1);**  **write('+',b);**  **end;**  **begin**  **a := flip(4,7);**  **writeln('');**  **writeln(a);**  **readln;**  **end.** |
| *Output* |
| 48.  48.jpg  49.  49.jpg |
| *Penjelasan* |
| 48. flip (4,7)  if (a=0) => flip := 0  if (b=0) => flop := 0  flip := a+flop(a-1,b) => flip := 4+flop(3,7)  flop := b + flip(a,b-1) => flop := 7 + flip(3,6)  flip := a + flop(a-1,b) => flip := 3 + flop(2,6)  flop := b + flip(a,b-1) => flop := 6 + flip(2,5)  flip := a + flop(a-1,b) => flip := 2 + flop(1,5)  flop := b + flip(a,b-1) => flop := 5 + flip(1,4)  flip := a + flop(a-1,b) => flip := 1 + flop(0,4)  flop := b + flip(a,b-1) => flop := 4 + flip(0,3)  flip(0,3) => 0  4 + 7 + 3 + 6 + 2 + 5 + 1 + 4 + 0 = 32  49. flop(100,200)  Prosesnya sama seperti no 48 dengan hasil nilai = 20200 |

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| *Soal* |
| soal 50.jpg |
| *Script yang telah diubah* |
|  |
| *Output* |
|  |
| *Penjelasan* |
|  |