

1) Write a constraint to generate pattern below pattern 0101010101.....

```
class packet;
    rand int a[];
    constraint size {a.size==10;}
    constraint c1 {foreach(a[i])
                    if(i%2==0)
                        a[i]==0;
                    else
                        a[i]==1;}}

    function void display();
        $display("a=%0p",a);
    endfunction
endclass
```

```
module tb;
    packet pkt;
    initial
        begin
            pkt=new();
            repeat(20)
                begin
                    pkt.randomize();
                    pkt.display();
                end
            end
        end
endmodule
```

<https://edaplayground.com/x/MnBV>

2) write a constraint to generate below pattern 9 19 29 39 49 59 69 79

```
class packet;
    rand int a[];
    constraint size {a.size==8;}
    constraint c1 {foreach(a[i])
                    a[i]==(i*10)+9;}

    function void display();
        $display("a=%0p",a);
    endfunction
endclass

module tb;
    packet pkt;
    initial
        begin
            pkt=new();
            repeat(10)
                begin
                    pkt.randomize();
                    pkt.display();
                end
            end
        end
endmodule
```

<https://edaplayground.com/x/mbWv>

3) write a constraint to generate below pattern 5 -10 15 -20 25 -30

```
class packet ;
    rand int a[];

    constraint size{a.size==6;}
    constraint c1 { foreach(a[i])
        if(i%2==0)
            a[i]==(i*5)+5;
        else
            a[i] == -5*(i+1);}

    function void display();
        $display("a=%0p",a);
    endfunction
endclass

module top;
    packet pkt;
    initial
        begin
            pkt=new();
            pkt.randomize();
            pkt.display();
        end
endmodule
```

<https://edaplayground.com/x/dVr8>

4) write a constraint to generate the pattern 0102030405

```
class packet;  
    rand int a[];  
    constraint size {a.size==10;};  
    constraint c1 {foreach(a[i])  
if(i%2==0)  
a[i]==0;  
else  
a[i]=(i+2)/2;}  
    function void display();  
        $display("a=%0p",a);  
    endfunction  
endclass
```

```
module tb;  
    packet pkt;  
    initial  
        begin  
            pkt=new();  
            pkt.randomize();  
            pkt.display();  
        end  
endmodule
```

<https://www.edaplayground.com/x/nn>

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