



```

$time = 0;

$Q = 1;
$Qb = 0;
$x = 0;
$y = 1;

$clk = 1;
$D = 0;

$n1 = 1;
$n2 = 0;
$n3 = 1;
$n4 = 1;
$n5 = 1;
$n6 = 0;

print "time=$time - clk=$clk, D=$D, Q=$Q, Qb=$Qb, x=$x, y=$y,
      n1=$n1, n2=$n2, n3=$n3, n4=$n4, n5=$n5, n6=$n6\n";

for ($time=0; $time < 40; $time ++ ) {

  $new_n1 = ($n4 && $n2) ? 0 : 1;
  $new_n2 = ($clk && $n1) ? 0 : 1;
  $new_n3 = ($clk && $n2 && $n4) ? 0 : 1;
  $new_n4 = ($D && $n3) ? 0 : 1;
  $new_n5 = ($n2 && $n6) ? 0 : 1;
  $new_n6 = ($n3 && $n5) ? 0 : 1;

  $n1 = $new_n1;
  $n2 = $new_n2;
  $n3 = $new_n3;
  $n4 = $new_n4;
  $n5 = $new_n5;
  $n6 = $new_n6;

  $x = $n2;
  $y = $n3;
  $Q = $n5;
  $Qb = $n6;

  print "time=$time - clk=$clk, D=$D, Q=$Q, Qb=$Qb, x=$x, y=$y,
        n1=$n1, n2=$n2, n3=$n3, n4=$n4, n5=$n5, n6=$n6\n";

  if ($time == 4 || $time == 20) {
    $clk = 0;
  }
  if ($time == 12 || $time == 28) {
    $clk = 1;
  }
  if ($time == 17) {
    $D = 1;
  }
}

```