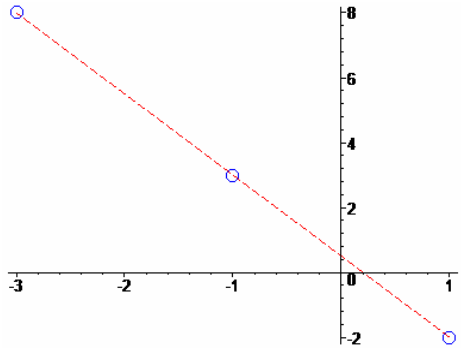
BTAD :

I . DOI XUNG TAM :

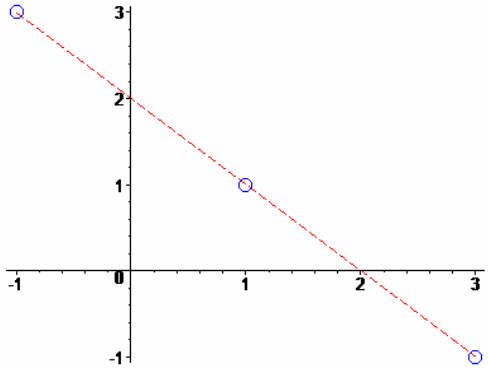
1/. " Cac gia thiet cho truoc " " Diem M = ", [1, -2]
" Tim hinh cua diem M", [x, y], " qua phep doi xung tam K", [-1, 3]



DS : $M1 = 2\,K - M$, " = f(M) = ", [-3, 8]

2/. " Cac gia thiet cho truoc " " Diem M = ", [-1, 3]

" Tim hinh cua diem M", [x, y], " qua phep doi xung tam K", [1, 1]



DS: [3, -1]

3/. " Cac gia thiet cho truoc " " Diem M = ", [x, y]

" Tim hinh cua diem M", [x, y], " qua phep doi xung tam K", [a_0, b_0]

DS: $M1 = 2\,K - M$, " = f(M) = ", [$-x + 2\,a_0$, $-y + 2\,b_0$]

4/. " Cac gia thiet cho truoc " " Diem M = ", [1, 0]

" Tim hinh cua diem M", [x, y], " qua phep doi xung tam K", [-2, -2]

DS: $M1 = 2\,K - M$, " = f(M) = ", [-5, -4]

5/. " Cac gia thiet cho truoc " " Diem M = ", [m, $m - 2$]

" Tim hinh cua diem M", [x, y], " qua phep doi xung tam K", [$1 - m$, $-2\,m$]

DS : $M1 = 2\,K - M$, " = f(M) = ", [–3 m + 2, –5 m + 2]

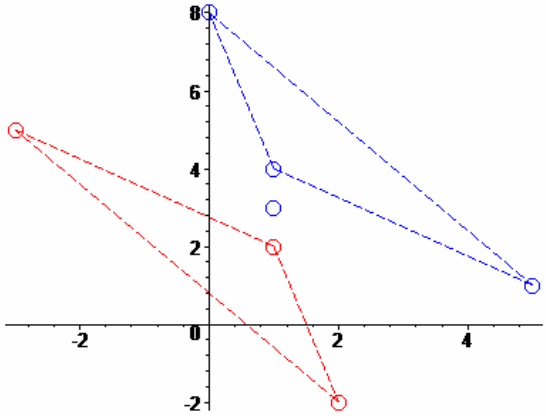
6/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [1, 2] " Diem B = ", [2, -2] " Diem C = ", [-3, 5]

" bang phep Doi xung tam K = " , [1, 3]

DS :

$A1 = 2\,K - A$, " = f(A) = ", [1, 4] $B1 = 2\,K - B$, " = f(B) = ", [0, 8] $C1 = 2\,K - C$, " = f(C) = ", [5, 1]



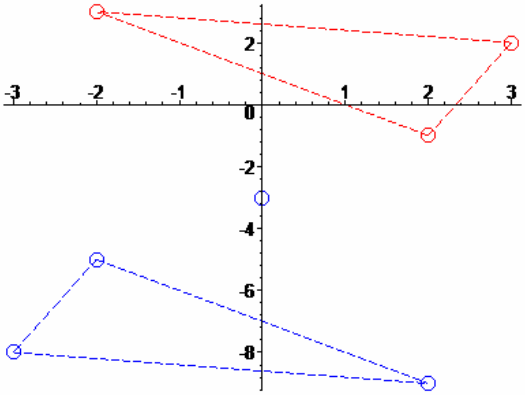
7/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [3, 2] " Diem B = ", [2, -1] " Diem C = ", [-2, 3]

" bang phep Doi xung tam K = ", [0, -3]

DS:

$A1 = 2\,K - A$, " = f(A) = ", [-3, -8] $B1 = 2\,K - B$, " = f(B) = ", [-2, -5] $C1 = 2\,K - C$, " = f(C) = ", [2, -9]



8/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [-3, 2] " Diem B = ", [2, -1] " Diem C = ", [-4, -3]

" bang phep Doi xung tam K = " , [1, -2]

DS:

A1 = 2 *K* – *A*, " = f(A) = ", [5, -6] *B1* = 2 *K* – *B*, " = f(B) = ", [0, -3] *C1* = 2 *K* – *C*, " = f(C) = ", [6, -1]

9/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [3, 2] " Diem B = ", [2, -1] " Diem C = ", [-4, -2]

" bang phep Doi xung tam K = " , [1, -1]

DS:

A1 = 2 *K* – *A*, " = f(A) = ", [-1, -4] *B1* = 2 *K* – *B*, " = f(B) = ", [0, -1] *C1* = 2 *K* – *C*, " = f(C) = ", [6, 0]

10/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [*a1*, *a2*] " Diem B = ", [*b1*, *b2*] " Diem C = ", [*c1*, *c2*]

" bang phep Doi xung tam K = " , [*k1*, *k2*]

DS: *A1* = 2 *K* – *A*, " = f(A) = ", [–*a1* + 2 *k1*, –*a2* + 2 *k2*]

B1 = 2 *K* – *B*, " = f(B) = ", [–*b1* + 2 *k1*, –*b2* + 2 *k2*]

C1 = 2 *K* – *C*, " = f(C) = ", [–*c1* + 2 *k1*, –*c2* + 2 *k2*]

11/. " Tim hinh cua tu giac voi gia thiet cho truoc "

" Diem A = ", [1, 3] " Diem B = ", [2, 2] " Diem C = ", [-2, -3] " Diem D = ", [-1, 1]

" Doi xung tam K = ", [-2, 1]

DS: *A1* = 2 *K* – *A*, " = f(A) = ", [-5, -1] *B1* = 2 *K* – *B*, " = f(B) = ", [-6, 0]

C1 = 2 *K* – *C*, " = f(C) = ", [-2, 5] D1 = 2 *K* – D, " = f(D) = ", [-3, 1]

12/. " Tim hinh cua tu giac voi gia thiet cho truoc "

" Diem A = ", [-1, 3] " Diem B = ", [1, -2] " Diem C = ", [2, 5] " Diem D = ", [4, -2]

" Doi xung tam K = ", [2, 1]

DS: *A1* = 2 *K* – *A*, " = f(A) = ", [5, -1] *B1* = 2 *K* – *B*, " = f(B) = ", [3, 4]

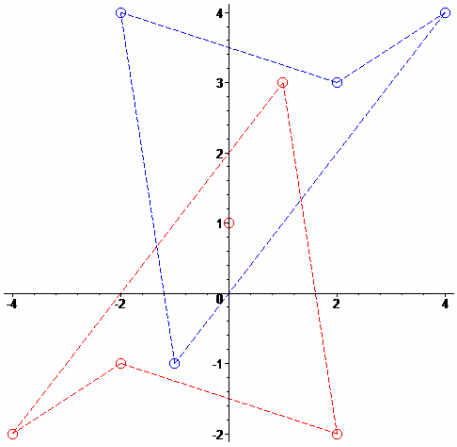
C1 = 2 *K* – *C*, " = f(C) = ", [2, -3] D1 = 2 *K* – D, " = f(D) = ", [0, 4]

13/. " Tim hinh cua tu giac voi gia thiet cho truoc "

" Diem A = ", [1, 3] " Diem B = ", [2, -2] " Diem C = ", [-2, -1] " Diem D = ", [-4, -2]

" Doi xung tam K = ", [0, 1]

DS: *A1* = 2 *K* – *A*, " = f(A) = ", [-1, -1] *B1* = 2 *K* – *B*, " = f(B) = ", [-2, 4]



C1 = 2 *K* – *C*, " = f(C) = ", [2, 3] D1 = 2 *K* – D, " = f(D) = ", [4, 4]

14/. " Tim hinh cua tu giac voi gia thiet cho truoc "

" Diem A = ", [1, 3] " Diem B = ", [2, -2] " Diem C = ", [-2, -1] " Diem D = ", [-4, 2]

" Doi xung tam K = ", [0, 1]

DS: *A1* = 2 *K* – *A*, " = f(A) = ", [-1, -1] *B1* = 2 *K* – *B*, " = f(B) = ", [-2, 4]

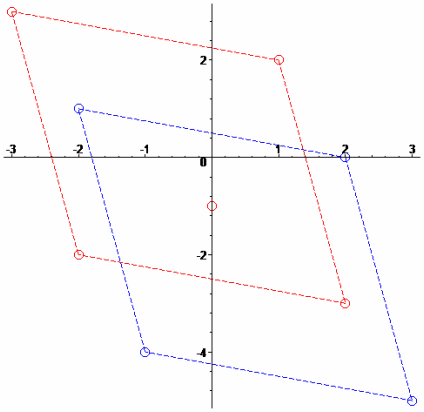
C1 = 2 *K* – *C*, " = f(C) = ", [2, 3] D1 = 2 *K* – D, " = f(D) = ", [4, 0]

15/. " Tim hinh cua tu giac voi gia thiet cho truoc "

" Diem A = ", [1, 2] " Diem B = ", [2, -3] " Diem C = ", [-2, -2] " Diem D = ", [-3, 3]

" Doi xung tam K = ", [0, -1]

DS: *A1* = 2 *K* – *A*, " = f(A) = ", [-1, -4] *B1* = 2 *K* – *B*, " = f(B) = ", [-2, 1]



C1 = 2 *K* – *C*, " = f(C) = ", [2, 0] D1 = 2 *K* – D, " = f(D) = ", [3, -5]

16/. " Tim hinh cua duong tron (C) : ", $x^2 + y^2 + 2x - 4y + 2 = 0$

"qua phep DOI XUNG TAM K = " , [-2, 1]

DS: $(x+3)^2 + y^2 = 3$ " Hay (C') :", $y^2 + x^2 + 6x + 6 = 0$

17/. " Tim hinh cua duong tron (C) : " , $x^2 + y^2 - 2x - 4y - 4 = 0$

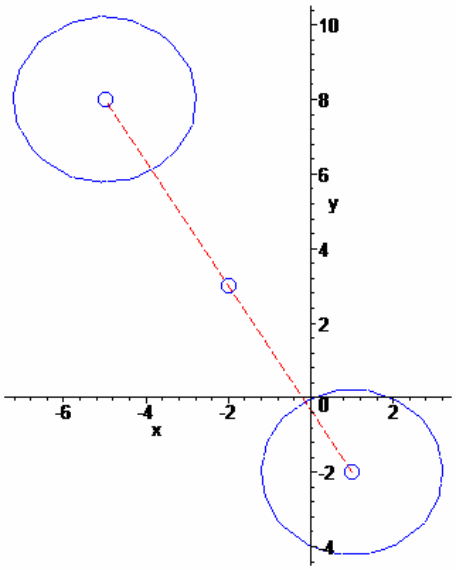
"qua phep DOI XUNG TAM K = " , [0, 0]

DS ; $(x+1)^2 + (y+2)^2 = 9$ " Hay (C') :", $y^2 + x^2 + 4y + 2x - 4 = 0$

18/. " Tim hinh cua duong tron (C) : " , $x^2 + y^2 - 2x + 4y = 0$

"qua phep DOI XUNG TAM K = " , [-2, 3]

DS:



$(x+5)^2 + (y-8)^2 = 5$ " Hay (C') :", $x^2 + y^2 + 10x - 16y + 84 = 0$

19/. " Tim hinh cua duong tron (C) : " , $x^2 + y^2 + 2x + 6y - 6 = 0$

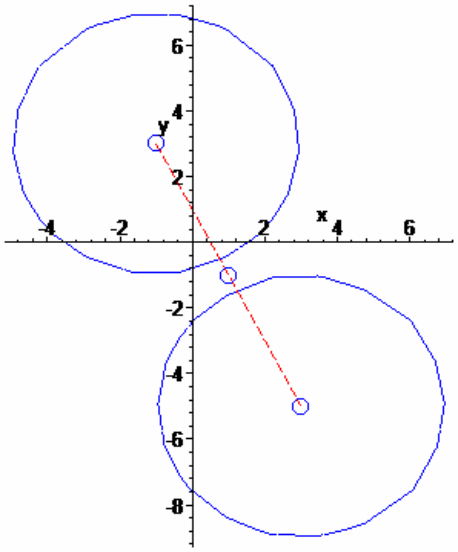
"qua phep DOI XUNG TAM K = " , [-2, 3]

DS: $(x+3)^2 + (y-9)^2 = 16$ " Hay (C') :", $y^2 + x^2 - 18y + 6x + 74 = 0$

20/. " Tim hinh cua duong tron (C) : " , $x^2 + y^2 + 2x - 6y - 6 = 0$

"qua phep DOI XUNG TAM K = " , [1, -1]

DS: $(x-3)^2+(y+5)^2=16$

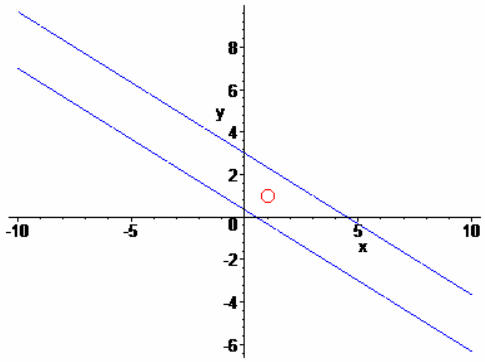


" Hay (C') :", $x^2+y^2-6x+10y+18=0$

21/. " Tim hinh cua duong thang (D): " , $x-2y+1=0$, " qua phep doi xung tam K", [3, 4]

DS: " Hay (D1) : " , $-x+2y-9=0$

22/. " Tim hinh cua duong thang (D): " , $2x+3y-1=0$, " qua phep doi xung tam K", [1, 1]

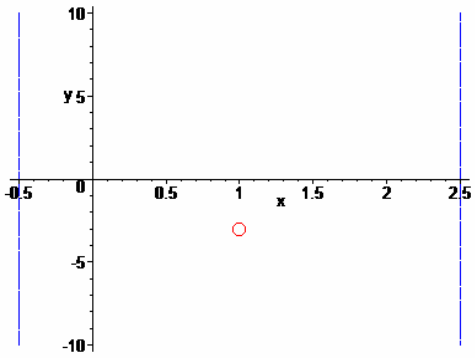


" Hay (D1) : " , $-2x-3y+9=0$

23/. " Tim hinh cua duong thang (D): " , $-1+3y=0$, " qua phep doi xung tam K", [2, -3]

DS: " Hay (D1) : " , $-3y-19=0$

24/. " Tim hinh cua duong thang (D): " , $2x-5=0$, " qua phep doi xung tam K", [1, -3]



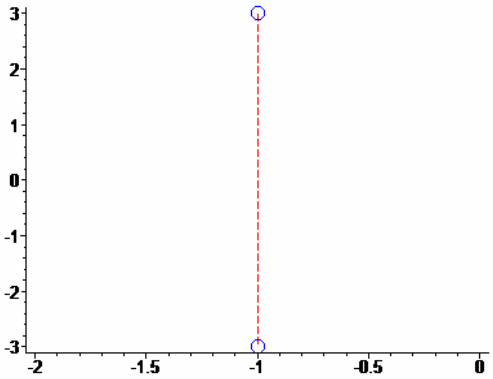
DS : " Hay (D1) : ", $-2x-1=0$

25/ . " Tim hinh cua duong thang (D): ", $Ax+By+C=0$, " qua phep doi xung tam K", $[xo, yo]$

DS: " Hay (D1) : ", $(2\,yo-y)\,B+C+(-x+2\,xo)\,A=0$

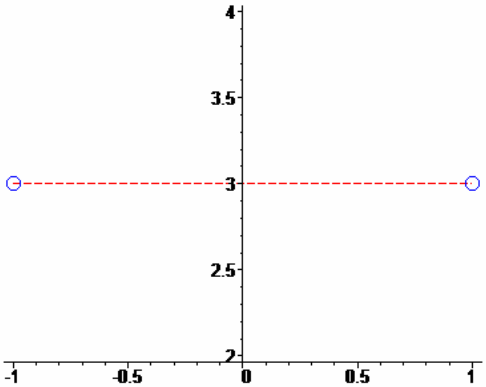
II . DOI XUNG TRUC :

1/. " Tim hinh cua diem M", [-1, 3], " qua phep doi xung truc ", x



DS: f(M) = $M1$, [-1, -3]

2/. " Tim hinh cua diem M", [-1, 3], " qua phep doi xung truc ", y



DS f(M) = $M1$, [1, 3]

3/. " Tim hinh cua diem M", $[m-1, -2m+3]$, " qua phep doi xung truc ", x

DS: $f(M) = M1, [m-1, 2m-3]$

4/. " Tim hinh cua diem M", $[m-1, -2m+3]$, " qua phep doi xung truc ", y

DS: $f(M) = M1, [-m+1, -2m+3]$

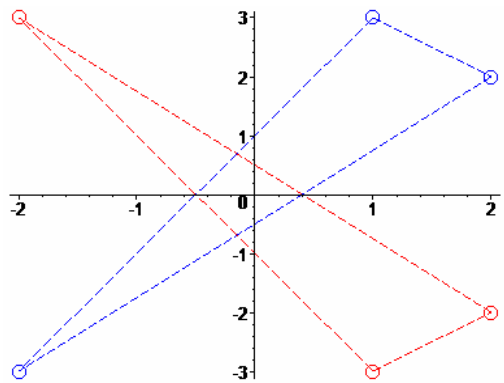
5/. " Tim hinh cua diem M", $[a-b, -2b+a]$, " qua phep doi xung truc ", y

DS $f(M) = M1, [-a+b, -2b+a]$

6/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [1, -3] " Diem B = ", [2, -2] " Diem C = ", [-2, 3]

" qua phep doi xung truc = ", x

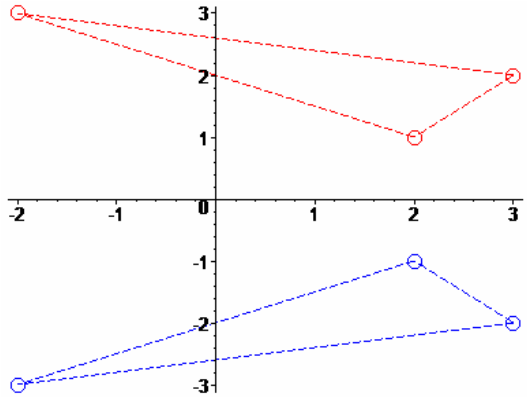


DS: $f(A) = A1, [1, 3]$ $f(B) = B1, [2, 2]$ $f(C) = C1, [-2, -3]$

7/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [3, 2] " Diem B = ", [2, 1] " Diem C = ", [-2, 3]

" qua phep doi xung truc = ", x



DS: $f(A) = A1, [3, -2]$ $f(B) = B1, [2, -1]$ $f(C) = C1, [-2, -3]$

8/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [-3, 2] " Diem B = ", [2, -1] " Diem C = ", [-4, -3]

" qua phep doi xung truc = ", y

DS: f(A) = $A1$, [3, 2] f(B) = $B1$, [-2, -1] f(C) = $C1$, [4, -3]

9/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [xA, yA] " Diem B = ", [xB, yB] " Diem C = ", [xC, yC]

" qua phep doi xung truc = ", y

DS: f(A) = $A1$, [$-xA$, yA] f(B) = $B1$, [$-xB$, yB] f(C) = $C1$, [$-xC$, yC]

10/. " Tim hinh cua TAM GIAC co cac diem "

" Diem A = ", [xA, yA] " Diem B = ", [xB, yB] " Diem C = ", [xC, yC]

" qua phep doi xung truc = ", x

DS: f(A) = $A1$, [xA, $-yA$] f(B) = $B1$, [xB, $-yB$] f(C) = $C1$, [xC, $-yC$]

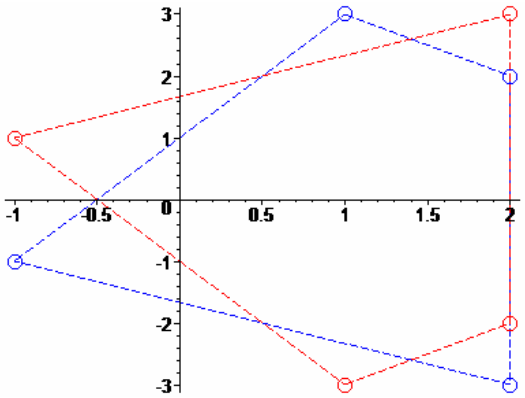
11/. " Tim hinh cua TU GIAC co cac diem "

" Diem A = ", [1, -3] " Diem B = ", [2, -2] " Diem C = ", [2, 3] " Diem D = ", [-1, 1]

" qua phep doi xung truc = ", x

DS:

f(A) = $A1$, [1, 3] f(B) = $B1$, [2, 2] f(C) = $C1$, [2, -3] f(D) = D1, [-1, -1]



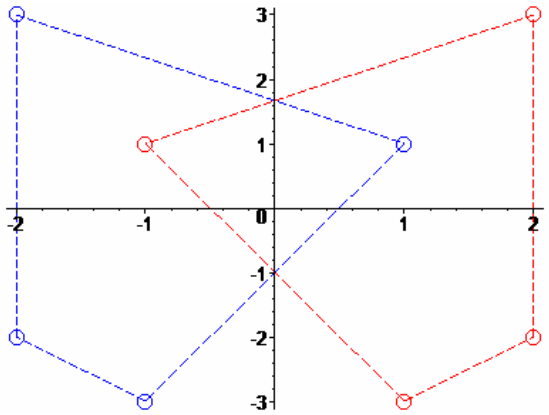
12/. " Tim hinh cua TU GIAC co cac diem "

" Diem A = ", [1, -3] " Diem B = ", [2, -2] " Diem C = ", [2, 3] " Diem D = ", [-1, 1]

" qua phep doi xung truc = ", y

DS:

f(A) = $A1$, [-1, -3] f(B) = $B1$, [-2, -2] f(C) = $C1$, [-2, 3] f(D) = D1, [1, 1]



13/. " Tim hinh cua TU GIAC co cac diem "

" Diem A = ", [1, 3] " Diem B = ", [2, 2] " Diem C = ", [-2, -3] " Diem D = ", [-1, 1]

" qua phep doi xung truc = ", y

DS: f(A) = $A1$, [-1, 3] f(B) = $B1$, [-2, 2] f(C) = $C1$, [2, -3] f(D) = D1, [1, 1]

14/. " Tim hinh cua TU GIAC co cac diem "

" Diem A = ", [1, 3] " Diem B = ", [2, 2] " Diem C = ", [-2, -3] " Diem D = ", [-1, 1]

" qua phep doi xung truc = ", x

DS: f(A) = $A1$, [1, -3] f(B) = $B1$, [2, -2] f(C) = $C1$, [-2, 3] f(D) = D1, [-1, -1]

15/. " Tim hinh cua TU GIAC co cac diem "

" Diem A = ", [m, $m - 1$] " Diem B = ", [$-m + 2$, $2\,m$]

" Diem C = ", [$m - 2$, $m + 3$] " Diem D = ", [$-1 - m$, m]

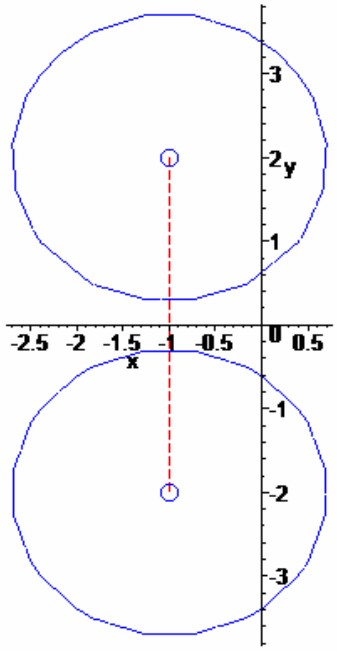
" qua phep doi xung truc = ", x

DS: f(A) = $A1$, [m, $-m + 1$] f(B) = $B1$, [$-m + 2$, $-2\,m$]

f(C) = $C1$, [$m - 2$, $-m - 3$] f(D) = D1, [$-1 - m$, $-m$]

16/. " Tim hinh cua duong tron (C) : " $x^2 + y^2 + 2\,x - 4\,y + 2 = 0$ "qua phep DOI XUNG TRUC = " , x

DS : " Hinh cua duong tron (C) qua phep doi xung truc " , x

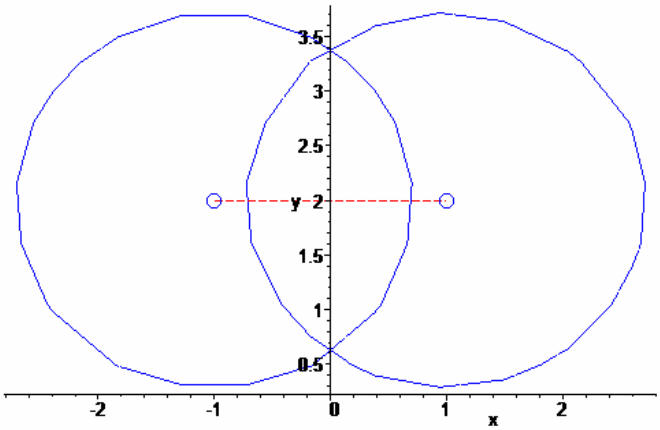


$(x+1)^2+(y+2)^2=3$ " Hay : (C') ", $x^2+y^2+2x+4y+2=0$

17/. " Tim hinh cua duong tron (C) : " $x^2+y^2-2x-4y-4=0$ "qua phep DOI XUNG TRUC = " , y

DS: " Hinh cua duong tron (C) qua phep doi xung truc " , y

$(x+1)^2+(y-2)^2=9$



" Hay : (C') ", $x^2+y^2+2x-4y-4=0$

18/. " Tim hinh cua duong tron (C) : " $x^2+y^2+2x-4y+2=0$ "qua phep DOI XUNG TRUC = " , y

DS: " Hinh cua duong tron (C) qua phep doi xung truc " , y

$(x-1)^2+(y-2)^2=3$ " Hay : (C') ", $x^2+y^2-2x-4y+2=0$

19/. " Tim hinh cua duong tron (C) : " $x^2+y^2-2x-4y-4=0$ "qua phep DOI XUNG TRUC = " , x

DS: " Hinh cua duong tron (C) qua phep doi xung truc " , x

$(x-1)^2+(y+2)^2=9$ " Hay : (C') ", $x^2+y^2-2x+4y-4=0$

20/. " Tim hinh cua duong tron (C) : " $x^2+y^2+2ax+2by+c=0$ "qua phep DOI XUNG TRUC = " , x

DS: " Hinh cua duong tron (C) qua phep doi xung truc " , x

$(x+a)^2+(y-b)^2=a^2+b^2-c$ " Hay : (C') ", $x^2+2xa-2by+y^2+c=0$

21/. " Tim hinh cua duong tron (C) : " $x^2+y^2+2xa+2by+c=0$ "qua phep DOI XUNG TRUC = " , y

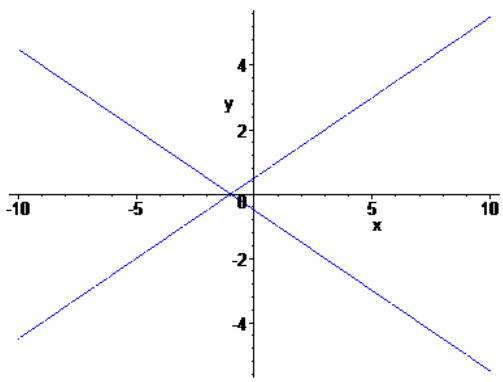
DS: " Hinh cua duong tron (C) qua phep doi xung truc " , y

$(x-a)^2+(y+b)^2=a^2+b^2-c$ " Hay : (C') ", $x^2-2xa+2by+y^2+c=0$

22/. " Tim hinh cua duong thang (D) " , $x-2y+1=0$, " qua phep doi xung truc ", x

DS:

" Hinh cua duong thang (D) qua phep doi xung truc " , x : [D1], $x+2y+1=0$



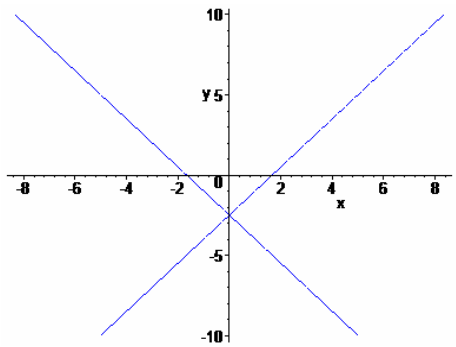
23/. " Tim hinh cua duong thang (D) " , $x-2y+1=0$, " qua phep doi xung truc ", y

DS: " Hinh cua duong thang (D) qua phep doi xung truc " , y : [D1], $-x-2y+1=0$

24/. " Tim hinh cua duong thang (D) " , $3x-2y-5=0$, " qua phep doi xung truc ", y

DS:

" Hinh cua duong thang (D) qua phep doi xung truc " , y : [D1], $-3x - 2y - 5 = 0$



25/. " Tim hinh cua duong thang (D) " , $3x - 2y - 5 = 0$, " qua phep doi xung truc ", x

DS: " Hinh cua duong thang (D) qua phep doi xung truc " , x : [D1], $3x + 2y - 5 = 0$

26/. " Tim hinh cua duong thang (D) " , $(m-1)x - 2my + m + 3 = 0$ " qua phep doi xung truc ", x

DS: " Hinh cua duong thang (D) qua phep doi xung truc " , x : [D1], $(m-1)x + 2my + m + 3 = 0$

27/. " Tim hinh cua duong thang (D) " , $(m-1)x - 2my + m + 3 = 0$ " qua phep doi xung truc ", y

DS: " Hinh cua duong thang (D) qua phep doi xung truc " , y : [D1], $-(m-1)x - 2my + m + 3 = 0$

28/. " Tim hinh cua duong thang (D) " , $Ax + By + C = 0$, " qua phep doi xung truc ", y

DS " Hinh cua duong thang (D) qua phep doi xung truc " , y : [D1], $-Ax + By + C = 0$

29/. " Tim hinh cua duong thang (D) " , $Ax + By + C = 0$, " qua phep doi xung truc ", x

DS " Hinh cua duong thang (D) qua phep doi xung truc " , x : [D1], $Ax - By + C = 0$

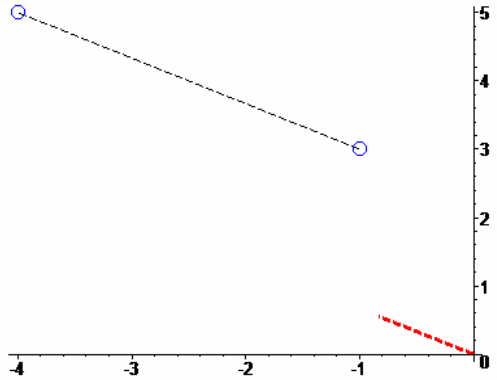
30/. " Tim hinh cua duong thang (D) " , $\frac{x}{A} + \frac{y}{B} + \frac{1}{C} = 0$, " qua phep doi xung truc ", x

DS " Hinh cua duong thang (D) qua phep doi xung truc " , x : [D1], $\frac{x}{A} - \frac{y}{B} + \frac{1}{C} = 0$

<u>III . TINH TIEN :</u>

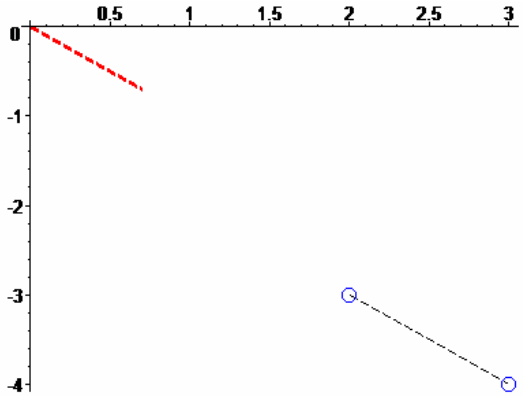
1/. " Tim hinh cua diem M", [-1, 3], " qua phep tinh tien vector v = ", [-3, 2]

DS: $M + v = M1$, [-4, 5]



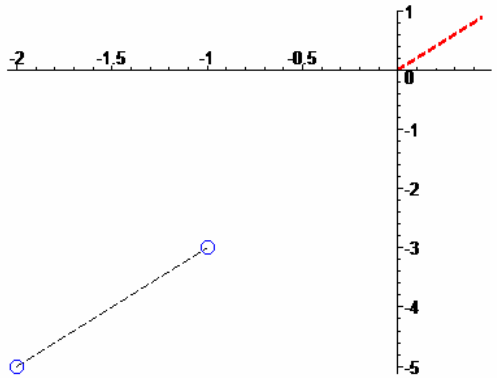
2/. " Tim hinh cua diem M", [2, -3], " qua phep tinh tien vector v = ", [1, -1]

DS: $M + v = M1$, [3, -4]



3/. " Tim hinh cua diem M", [-2, -5], " qua phep tinh tien vector v = ", [1, 2]

DS $M + v = M1$, [-1, -3]



4/. " Tim hinh cua diem M", [$m - 1, -2m + 3$], " qua phep tinh tien vector v = ", [1, -1]

DS: $M + v = M1, [m, 2 - 2m]$

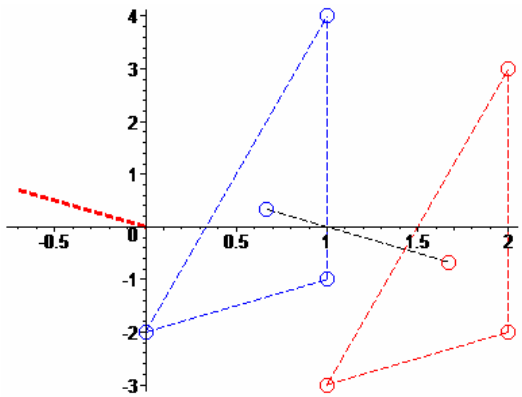
5/. " Tim hinh cua diem M", [x, y], " qua phep tinh tien vector v = ", [v_1, v_2]

DS: $M + v = M1, [v_1 + x, v_2 + y]$

6/. " Tim hinh cua TAM GIAC co : " " Diem A = ", [1, -3] " Diem B = ", [2, -2] " Diem C = ", [2, 3]

" qua phep tinh tien theo Vector v = " , [-1, 1]

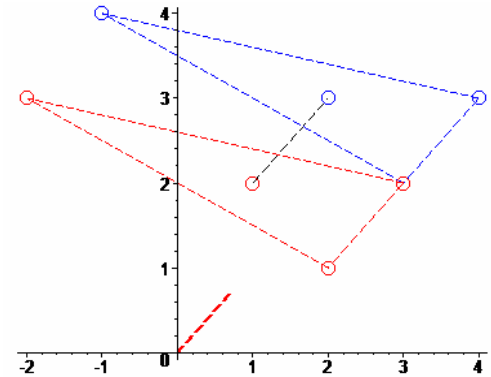
DS $A + v = A1$, [0, -2] $B + v = B1$, [1, -1] $C + v = C1$, [1, 4]



7/. " Tim hinh cua TAM GIAC co : " " Diem A = ", [3, 2] " Diem B = ", [2, 1] " Diem C = ", [-2, 3]

" qua phep tinh tien theo Vector v = " , [1, 1]

DS $A + v = A1$, [4, 3] $B + v = B1$, [3, 2] $C + v = C1$, [-1, 4]



8/. " Tim hinh cua TAM GIAC co : " " Diem A = ", [-3, 2] " Diem B = ", [2, -1] " Diem C = ", [-4, -3]

" qua phep tinh tien theo Vector v = " , [1, -1]

DS $A + v = A1$, [-2, 1] $B + v = B1$, [3, -2] $C + v = C1$, [-3, -4]

9/. " Tim hinh cua TAM GIAC co : " " Diem A = ", [-3, 2] " Diem B = ", [2, -1] " Diem C = ", [-2, 3]

" qua phep tinh tien theo Vector v = " , [1, 0]

DS $A + v = A1$, [-2, 2] $B + v = B1$, [3, -1] $C + v = C1$, [-1, 3]

10/.

" Tim hinh cua TAM GIAC co : " " Diem A = ", [xA, yA] " Diem B = ", [xB, yB] " Diem C = ", [xC, yC]

" qua phep tinh tien theo Vector v = " , [v_1, v_2]

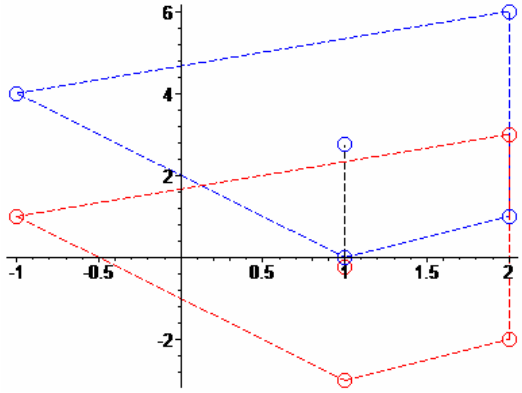
DS $A + v = A1$, [$v_1 + xA$, $v_2 + yA$] $B + v = B1$, [$v_1 + xB$, $v_2 + yB$] $C + v = C1$, [$v_1 + xC$, $v_2 + yC$]

11/. " Tim hinh cua TU GIAC co : " " Diem A = ", [1, -3] " Diem B = ", [2, -2]

" Diem C = ", [2, 3] " Diem D = ", [-1, 1]

"qua phep tinh tien theo Vector v = " , [0, 3]

DS: $A + v = A1$, [1, 0] $B + v = B1$, [2, 1] $C + v = C1$, [2, 6] D + v = D1, [-1, 4]

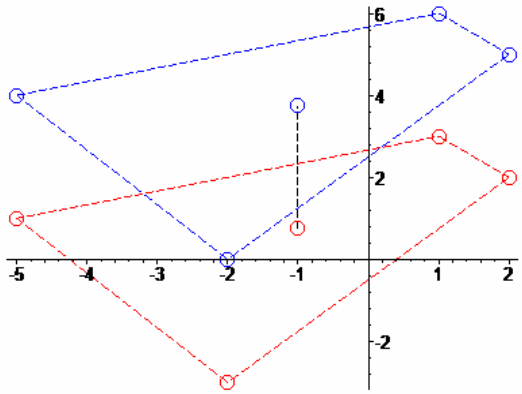


12/. " Tim hinh cua TU GIAC co : " " Diem A = ", [1, 3] " Diem B = ", [2, 2]

" Diem C = ", [-2, -3] " Diem D = ", [-5, 1]

"qua phep tinh tien theo Vector v = " , [0, 3]

DS $A + v = A1$, [1, 6] $B + v = B1$, [2, 5] $C + v = C1$, [-2, 0] D + v = D1, [-5, 4]



13/. " Tim hinh cua TU GIAC co : " " Diem A = ", [1, -3] " Diem B = ", [2, -2]

" Diem C = ", [3, 3] " Diem D = ", [-1, 1]

"qua phep tinh tien theo Vector v = " , [0, 3]

DS $A + v = A1$, [1, 0] $B + v = B1$, [2, 1] $C + v = C1$, [3, 6] D + v = D1, [-1, 4]

14/. " Tim hinh cua TU GIAC co : " " Diem A = ", [1, -3] " Diem B = ", [2, -2]

" Diem C = ", [3, 3] " Diem D = ", [-1, 1]

"qua phep tinh tien theo Vector v = " , [-2, 3]

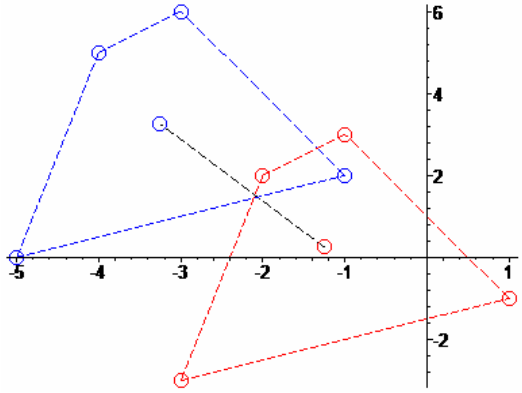
DS $B + v = B1$, [0, 1] $A + v = A1$, [-1, 0] $C + v = C1$, [1, 6] D + v = D1, [-3, 4]

15/. " Tim hinh cua TU GIAC co : " " Diem A = ", [-1, 3] " Diem B = ", [-2, 2]

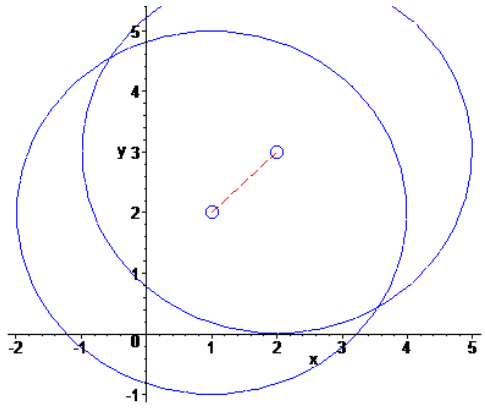
" Diem C = ", [-3, -3] " Diem D = ", [1, -1]

"qua phep tinh tien theo Vector v = " , [-2, 3]

DS $A + v = A1$, [-3, 6] $B + v = B1$ $C + v = C1$, [-5, 0] D + v = D1, [-1, 2]



16/. " Tim hinh cua duong tron (C) : " $x^2 + y^2 + 2x - 4y + 2 = 0$

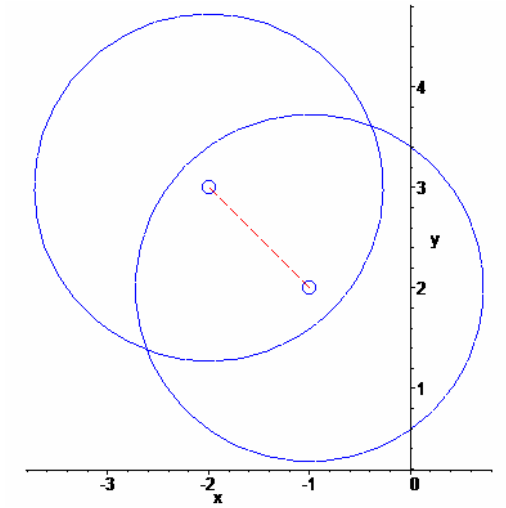


" qua phep tinh tien vector V = ", [-1, 1]

DS

" Hinh cua duong tron (C) qua phep tinh tien vector V = " , [-1, 1]

$(x+2)^2+(y-3)^2=3$ " Hay (C') : ", $x^2+y^2+4x-6y+10=0$



17/. " Tim hinh cua duong tron (C) : " $x^2+y^2-2x-4y-4=0$

" qua phep tinh tien vector V = ", [1, 1]

DS " Hinh cua duong tron (C) qua phep tinh tien vector V = " , [1, 1]

$(x-2)^2+(y-3)^2=9$ " Hay (C') : ", $x^2+y^2-4x-6y+4=0$

18/. " Tim hinh cua duong tron (C) : " $x^2+y^2+4x-4y-1=0$

" qua phep tinh tien vector V = ", [1, 1]

DS " Hinh cua duong tron (C) qua phep tinh tien vector V = " , [1, 1]

$(x+1)^2+(y-3)^2=9$ " Hay (C') : ", $x^2+y^2+2x-6y+1=0$

19/. " Tim hinh cua duong tron (C) : " $x^2+y^2-x-2y+1=0$ " qua phep tinh tien vector V = ", [1, 2]

DS " Hinh cua duong tron (C) qua phep tinh tien vector V = " , [1, 2]

$\left(x-\frac{3}{2}\right)^2+(y-3)^2=\frac{1}{4}$ " Hay (C') : ", $x^2+y^2-3x-6y+11=0$

20/. " Tim hinh cua duong tron (C) : " $x^2+y^2-2x-6y+1=0$

" qua phep tinh tien vector V = ", [1, 2]

DS " Hinh cua duong tron (C) qua phep tinh tien vector V = " , [1, 2]

$(x-2)^2 + (y-5)^2 = 9$ " Hay (C') : ", $x^2 + y^2 - 4x - 10y + 20 = 0$

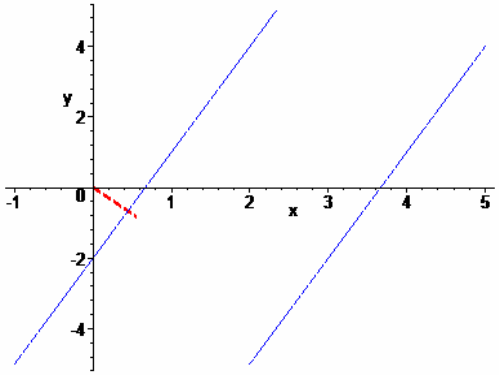
21/. " Tim hinh cua Duong thang (D) " $3x - 2y + 5 = 0$ " qua phep tinh tien Vector v = ", [-1, 2]

DS " Hinh cua duong thang (D) qua phep tinh tien vector ", [-1, 2]

[D1], $3x1 + 12 - 2y1 = 0$ " Hay : (D1) ", $3x - 2y + 12 = 0$

22/. " Tim hinh cua Duong thang (D) " $3x - y - 2 = 0$ " qua phep tinh tien Vector v = ", [2, -3]

DS " Hinh cua duong thang (D) qua phep tinh tien vector ", [2, -3]



[D1], $3x1 - 11 - y1 = 0$ " Hay : (D1) ", $3x - y - 11 = 0$

23/. " Tim hinh cua Duong thang (D) " $2x - 3y - 2 = 0$ " qua phep tinh tien Vector v = ", [1, 2]

DS " Hinh cua duong thang (D) qua phep tinh tien vector ", [1, 2]

[D1], $2x1 + 2 - 3y1 = 0$ " Hay : (D1) ", $2x - 3y + 2 = 0$

24/. " Tim hinh cua Duong thang (D) " $Ax + By + C = 0$ " qua phep tinh tien Vector v = ", [$v1$, $v2$]

DS " Hinh cua duong thang (D) qua phep tinh tien vector ", [$v1$, $v2$]

[D1], $A(x1 - v1) + B(y1 - v2) + C = 0$ " Hay : (D1) ", $(x - v1)A + C + (y - v2)B = 0$

25/. " Tim hinh cua Duong thang (D) " $Bx - Ay + m = 0$ " qua phep tinh tien Vector v = ", [$v1$, $v2$]

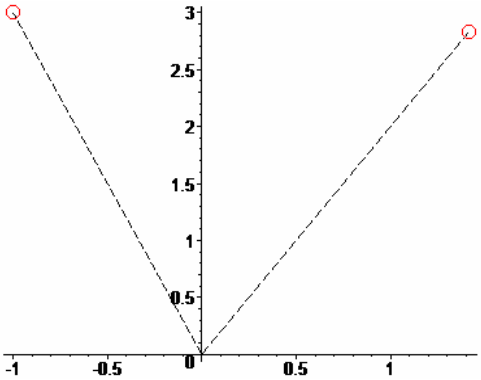
DS " Hinh cua duong thang (D) qua phep tinh tien vector ", [$v1$, $v2$]

[D1], $B(x1 - v1) - A(y1 - v2) + m = 0$ " Hay : (D1) ", $m - (y - v2)A + (x - v1)B = 0$

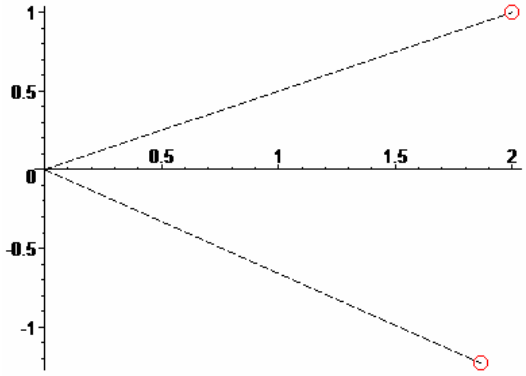
<u>III . QUAY GOC a :</u>

1/. " Tim hinh cua diem M", [-1, 3], " qua phep quay mot goc a = " , $\frac{1}{4}\pi$

DS " Diem M1 ", [$\sqrt{2}$, 2 $\sqrt{2}$]

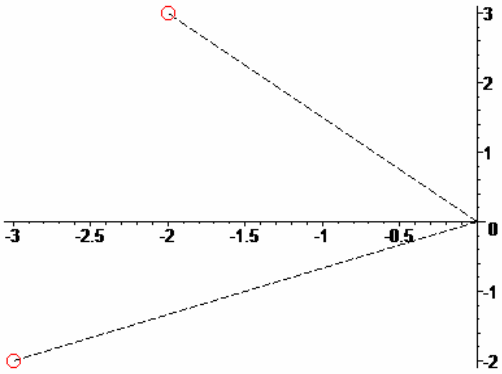


2/. " Tim hinh cua diem M", [2, 1], " qua phep quay mot goc a = " , $\frac{1}{3}\pi$



DS " Diem M1 ", $\left[1+\frac{1}{2}\sqrt{3}, \frac{1}{2}-\sqrt{3}\right]$

3/. " Tim hinh cua diem M", [-3, -2], " qua phep quay mot goc a = " , $\frac{1}{2}\pi$



DS " Diem M1 ", [-2, 3]

4/. " Tim hinh cua diem M", [x, y], " qua phep quay mot goc a = " , $\frac{1}{4}\pi$

DS " Diem M1 ", $\left[\frac{1}{2}\sqrt{2}\,x+\frac{1}{2}\sqrt{2}\,y,\ \frac{1}{2}\sqrt{2}\,y-\frac{1}{2}\sqrt{2}\,x\right]$

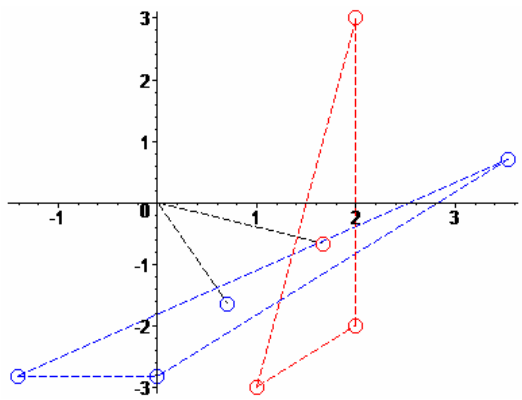
5/. " Tim hinh cua diem M", [x, y], " qua phep quay mot goc a = " , $-\frac{1}{3}\pi$

DS " Diem M1 ", $\left[\frac{1}{2}x-\frac{1}{2}\sqrt{3}\,y,\ \frac{1}{2}y+\frac{1}{2}\sqrt{3}\,x\right]$

6/. " Tim hinh cua TAM GIAC co " " Diem A = ", [1, -3] " Diem B = ", [2, -2] " Diem C = ", [2, 3]

" qua phep quay mot goc a = " , $\frac{1}{4}\pi$

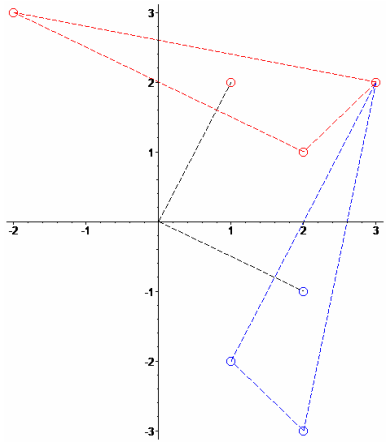
DS " Diem A1 ", $[-\sqrt{2}, -2\sqrt{2}]$ " Diem B1 ", $[0, -2\sqrt{2}]$ " Diem C1 ", $\left[\frac{5}{2}\sqrt{2}, \frac{1}{2}\sqrt{2}\right]$



7/. " Tim hinh cua TAM GIAC co " " Diem A = ", [3, 2] " Diem B = ", [2, 1] " Diem C = ", [-2, 3]

" qua phep quay mot goc a = " , $\frac{1}{2}\pi$

DS " Diem A1 ", [2, -3] " Diem B1 ", [1, -2] " Diem C1 ", [3, 2]



8/. " Tim hinh cua TAM GIAC co " " Diem A = ", [-3, 2] " Diem B = ", [2, -1] " Diem C = ", [2, 1]

" qua phep quay mot goc a = " , π

DS " Diem A1 ", [3, -2] " Diem B1 ", [-2, 1] " Diem C1 ", [-2, -1]

9/. " Tim hinh cua TAM GIAC co " " Diem A = ", [-3, 2] " Diem B = ", [2, -1] " Diem C = ", [2, 1]

" qua phep quay mot goc a = " , $-\frac{1}{6}\pi$

DS

" Diem A1 ", $\left[-1-\frac{3}{2}\sqrt{3}, -\frac{3}{2}+\sqrt{3}\right]$ " Diem B1 ", $\left[\frac{1}{2}+\sqrt{3}, 1-\frac{1}{2}\sqrt{3}\right]$

" Diem C1 ", $\left[-\frac{1}{2}+\sqrt{3}, 1+\frac{1}{2}\sqrt{3}\right]$

10/. " Tim hinh cua TAM GIAC co " " Diem A = ", [-1, 2] " Diem B = ", [2, -1] " Diem C = ", [2, 1]

" qua phep quay mot goc a = " , $\frac{2}{3}\pi$

DS: " Diem A1 ", $\left[\frac{1}{2}+\sqrt{3}, -1+\frac{1}{2}\sqrt{3}\right]$ " Diem B1 ", $\left[-1-\frac{1}{2}\sqrt{3}, \frac{1}{2}-\sqrt{3}\right]$

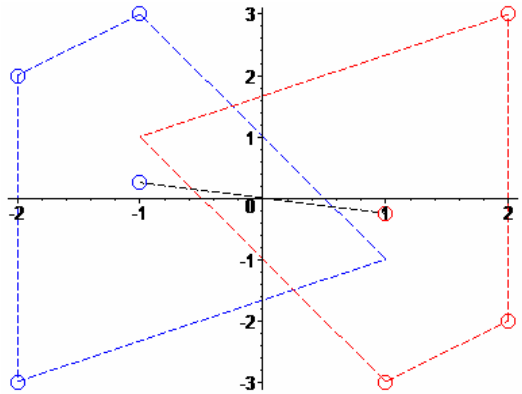
" Diem C1 ", $\left[-1+\frac{1}{2}\sqrt{3}, -\frac{1}{2}-\sqrt{3}\right]$

11/. " Tim hinh cua TU GIAC co " " Diem A = ", [1, -3] " Diem B = ", [2, -2]

" Diem C = ", [2, 3] " Diem D = ", [-1, 1]

" qua phep quay mot goc a = " , $-\pi$

DS " Diem A1 ", [-1, 3] " Diem B1 ", [-2, 2] " Diem C1 ", [-2, -3] " Diem D1 ", [1, -1]



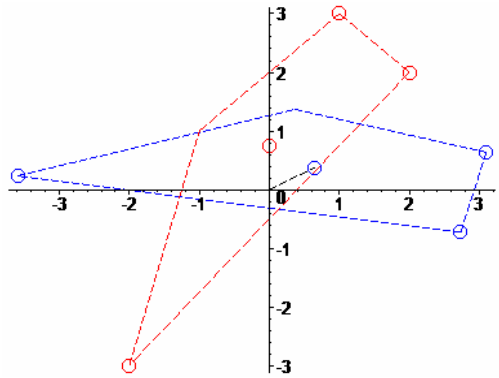
12/. " Tim hinh cua TU GIAC co " " Diem A = ", [1, 3] " Diem B = ", [2, 2]

" Diem C = ", [-2, -3] " Diem D = ", [-1, 1]

$$\text{" qua phep quay mot goc a = "}, \frac{1}{3}\pi$$

DS " Diem A1 ", $\left[\frac{1}{2}+\frac{3}{2}\sqrt{3}, \frac{3}{2}-\frac{1}{2}\sqrt{3}\right]$ " Diem B1 ", $[1+\sqrt{3}, 1-\sqrt{3}]$

" Diem C1 ", $\left[-1-\frac{3}{2}\sqrt{3}, -\frac{3}{2}+\sqrt{3}\right]$ " Diem D1 ", $\left[-\frac{1}{2}+\frac{1}{2}\sqrt{3}, \frac{1}{2}+\frac{1}{2}\sqrt{3}\right]$



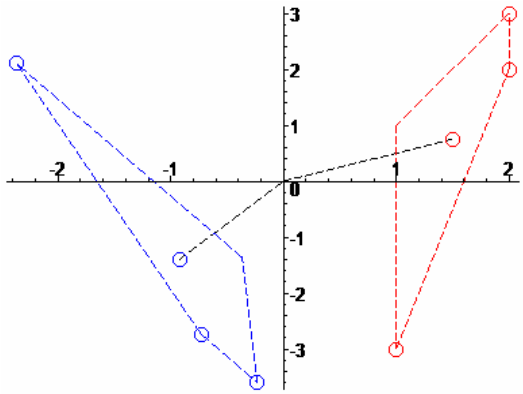
13/. " Tim hinh cua TU GIAC co " " Diem A = ", [1, -3] " Diem B = ", [2, 2]

" Diem C = ", [2, 3] " Diem D = ", [1, 1]

$$\text{" qua phep quay mot goc a = "}, \frac{5}{6}\pi$$

DS " Diem A1 ", $\left[-\frac{3}{2}-\frac{1}{2}\sqrt{3}, -\frac{1}{2}+\frac{3}{2}\sqrt{3}\right]$ " Diem B1 ", $[1-\sqrt{3}, -1-\sqrt{3}]$

" Diem C1 ", $\left[\frac{3}{2}-\sqrt{3}, -1-\frac{3}{2}\sqrt{3}\right]$ " Diem D1 ", $\left[\frac{1}{2}-\frac{1}{2}\sqrt{3}, -\frac{1}{2}-\frac{1}{2}\sqrt{3}\right]$

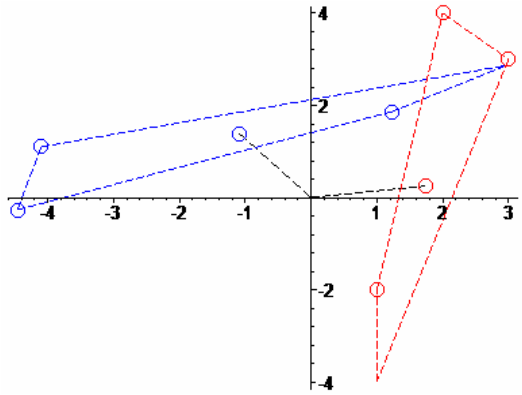


14/. " Tim hinh cua TU GIAC co " " Diem A = ", [1, -2] " Diem B = ", [2, 4]
" Diem C = ", [3, 3] " Diem D = ", [1, -4]

" qua phep quay mot goc a = " , $\frac{4}{3}\pi$

DS " Diem A1 ", $\left[-\frac{1}{2}+\sqrt{3},\ 1+\frac{1}{2}\sqrt{3}\right]$ " Diem B1 ", $[-1-2\sqrt{3},\ -2+\sqrt{3}]$

" Diem C1 ", $\left[-\frac{3}{2}-\frac{3}{2}\sqrt{3},\ -\frac{3}{2}+\frac{3}{2}\sqrt{3}\right]$ " Diem D1 ", $\left[-\frac{1}{2}+2\sqrt{3},\ 2+\frac{1}{2}\sqrt{3}\right]$



15/. " Tim hinh cua TU GIAC co " " Diem A = ", [-1, 2] " Diem B = ", [-2, -4]
" Diem C = ", [-3, -3] " Diem D = ", [-1, 4]

" qua phep quay mot goc a = " , $\frac{3}{4}\pi$

DS " Diem A1 ", $\left[\frac{3}{2}\sqrt{2},\ -\frac{1}{2}\sqrt{2}\right]$ " Diem B1 ", $[-\sqrt{2},\ 3\sqrt{2}]$

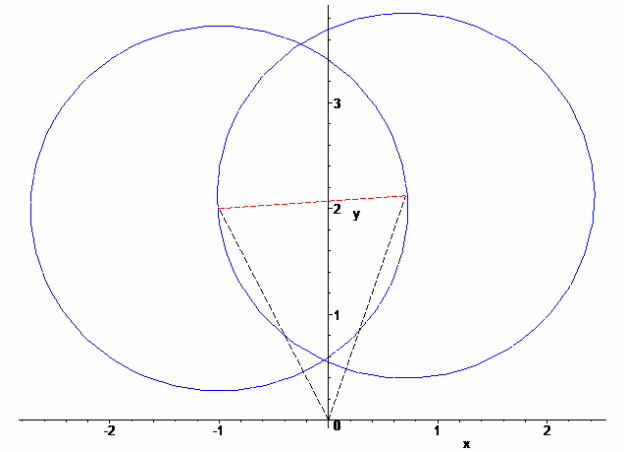
" Diem C1 ", $[0,\ 3\sqrt{2}]$ " Diem D1 ", $\left[\frac{5}{2}\sqrt{2},\ -\frac{3}{2}\sqrt{2}\right]$

16/. " Tim hinh Phuong trinh duong tron co dang : " $x^2 + y^2 + 2x - 4y + 2 = 0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{1}{4}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{1}{4}\pi$

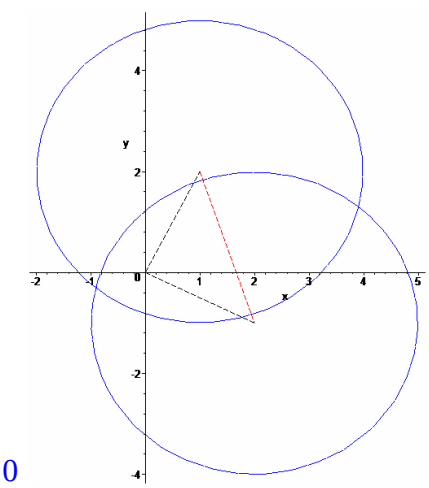
$\left(x - \frac{1}{2}\sqrt{2}\right)^2 + \left(y - \frac{3}{2}\sqrt{2}\right)^2 = 3$ " Hay (C') : ", $x^2 + y^2 - \sqrt{2}\,x - 3\sqrt{2}\,y + 2 = 0$



17/. " Tim hinh Phuong trinh duong tron co dang : " $x^2 + y^2 - 2x - 4y - 4 = 0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{1}{2}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{1}{2}\pi$



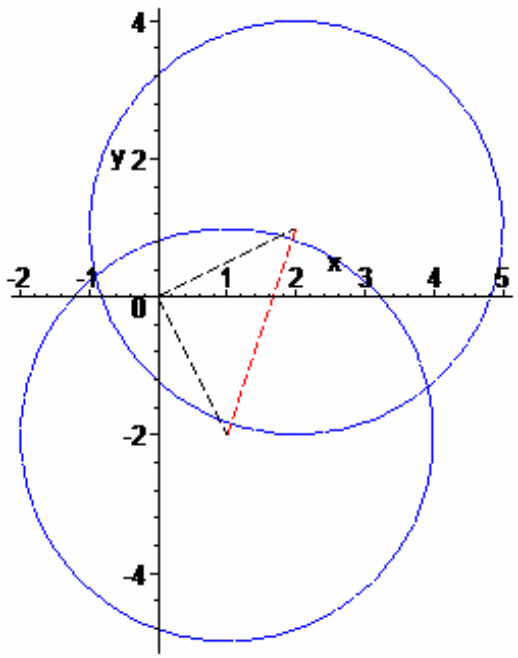
$(x-2)^2 + (y+1)^2 = 9$ " Hay (C') : ", $x^2 + y^2 - 4x + 2y - 4 = 0$

18/. " Tim hinh Phuong trinh duong tron co dang : " $x^2 + y^2 - 2x + 4y - 4 = 0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{3}{2}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{3}{2}\pi$

$(x-2)^2+(y-1)^2=9$ " Hay (C') : ", $x^2+y^2-4x-2y-4=0$

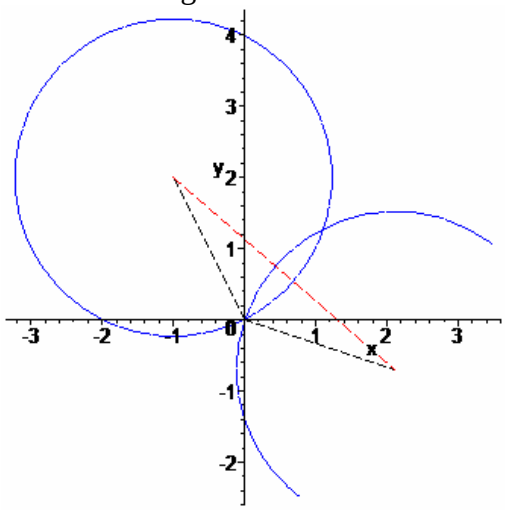


19/. " Tim hinh Phuong trinh duong tron co dang : " $x^2+y^2+2x-4y=0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{3}{4}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{3}{4}\pi$

$\left(x-\frac{3}{2}\sqrt{2}\right)^2+\left(y+\frac{1}{2}\sqrt{2}\right)^2=5$ " Hay (C') : ", $x^2+y^2-3\sqrt{2}\,x+\sqrt{2}\,y=0$

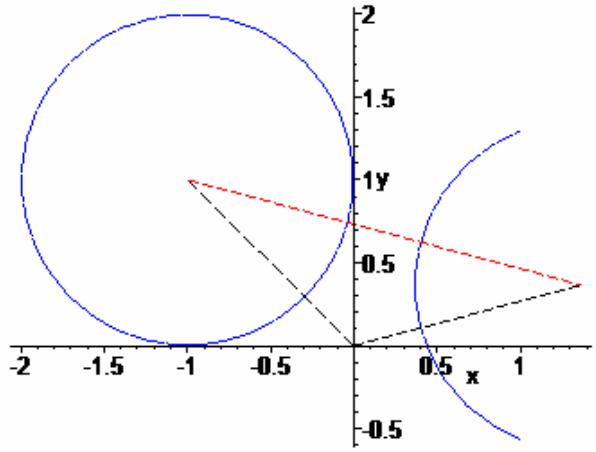


20/. " Tim hinh Phuong trinh duong tron co dang : " $x^2 + y^2 + 2\,x - 2\,y + 1 = 0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{2}{3}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{2}{3}\pi$

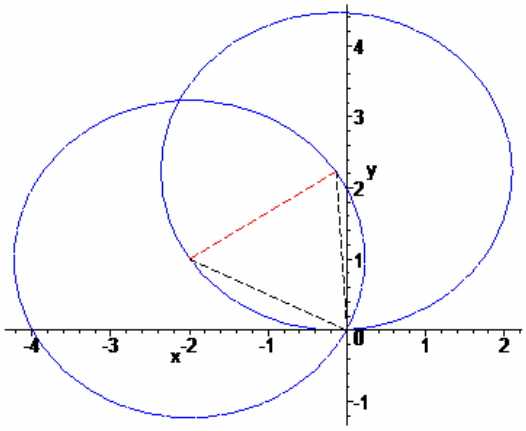
$\left(x - \frac{1}{2} - \frac{1}{2}\sqrt{3}\right)^2 + \left(y + \frac{1}{2} - \frac{1}{2}\sqrt{3}\right)^2 = 1$ " Hay (C') : ", $x^2 + y^2 - x - \sqrt{3}\,x + y - \sqrt{3}\,y + 1 = 0$



21/. " Tim hinh Phuong trinh duong tron co dang : " $x^2 + y^2 + 4\,x - 2\,y = 0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{1}{3}\pi$

DS



" Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{1}{3}\pi$

$$\left(x+1-\frac{1}{2}\sqrt{3}\right)^2+\left(y-\frac{1}{2}-\sqrt{3}\right)^2=5$$

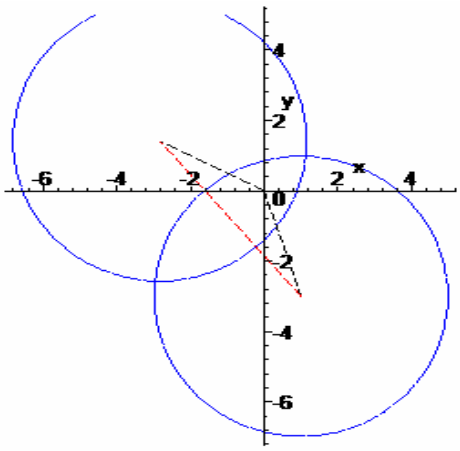
" Hay (C') : ", $x^2+y^2+2x-\sqrt{3}\,x-y-2\sqrt{3}\,y=0$

22/. " Tim hinh Phuong trinh duong tron co dang : " $x^2+y^2-2x+6y-6=0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{3}{4}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{3}{4}\pi$

$(x+2\sqrt{2})^2+(y-\sqrt{2})^2=16$ " Hay (C') : ", $x^2+y^2+4\sqrt{2}\,x-2\sqrt{2}\,y-6=0$



23/. " Tim hinh Phuong trinh duong tron co dang : " $x^2+y^2-4x+6y-3=0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{3}{4}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{3}{4}\pi$

$$\left(x+\frac{5}{2}\sqrt{2}\right)^2+\left(y-\frac{1}{2}\sqrt{2}\right)^2=16 \text{ " Hay (C') : ", } x^2+y^2+5\sqrt{2}\,x-\sqrt{2}\,y-3=0$$

24/. " Tim hinh Phuong trinh duong tron co dang : " $x^2+y^2+4x-6y-3=0$

" qua phep QUAY goc CHO TRUOC : " , $\frac{2}{3}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{2}{3}\pi$

$$\left(x-1-\frac{3}{2}\sqrt{3}\right)^2+\left(y+\frac{3}{2}-\sqrt{3}\right)^2=16$$

$$\text{" Hay (C') : ", } x^2+y^2-2x-3\sqrt{3}\,x+3y-2\sqrt{3}\,y-3=0$$

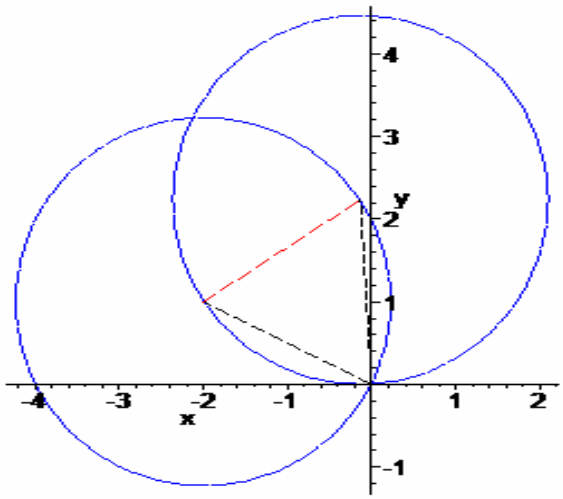
25/. " Tim hinh Phuong trinh duong tron co dang : "

$$x^2+y^2+4x-2y=0$$

" qua phep QUAY goc CHO TRUOC : " , $\frac{1}{3}\pi$

DS " Hinh cua duong tron (C) qua PHEP QUAY MOT GOC ALPHA = " , $\frac{1}{3}\pi$

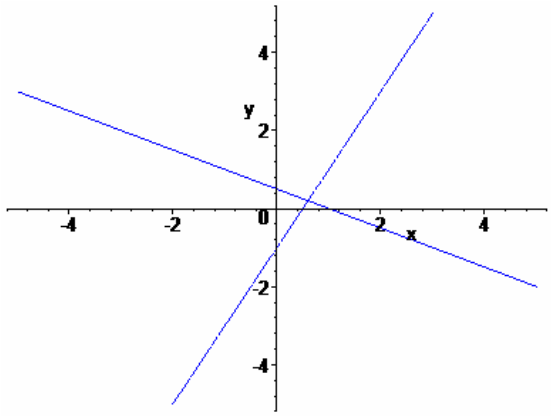
$$\left(x+1-\frac{1}{2}\sqrt{3}\right)^2+\left(y-\frac{1}{2}-\sqrt{3}\right)^2=5 \quad \text{" Hay (C') : ", } x^2+y^2+2x-\sqrt{3}\,x-y-2\sqrt{3}\,y=0$$



26/. " Tim hinh cua duong thang (D) " , $x + 2\,y - 1 = 0$, " qua phep quay mot goc a = " , $\frac{1}{2}\pi$

DS " Hinh cua duong thang (D) qua phep quay " , $-y1 + 2\,x1 - 1 = 0$

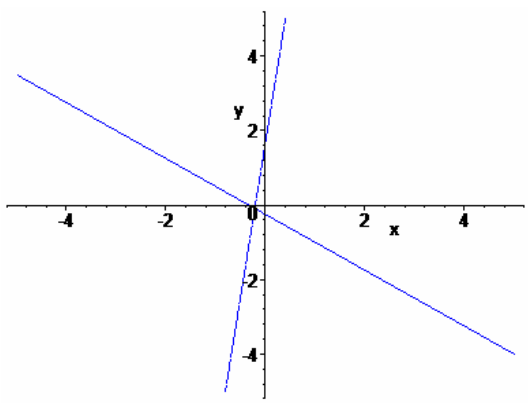
" Hay : (D1) " , $2\,x - y - 1 = 0$



27/. " Tim hinh cua duong thang (D) " , $3\,x + 4\,y + 1 = 0$, " qua phep quay mot goc a = " , $\frac{1}{3}\pi$

DS " Hinh cua duong thang (D) qua phep quay " , $\frac{3}{2}x1 - \frac{3}{2}y1\sqrt{3} + 2\,x1\sqrt{3} + 2\,y1 + 1 = 0$

" Hay : (D1) " , $\frac{3}{2}x + 2\sqrt{3}\,x - \frac{3}{2}\sqrt{3}\,y + 2\,y + 1 = 0$



28/. " Tim hinh cua duong thang (D) " , $A\,x + B\,y + C = 0$, " qua phep quay mot goc a = " , α

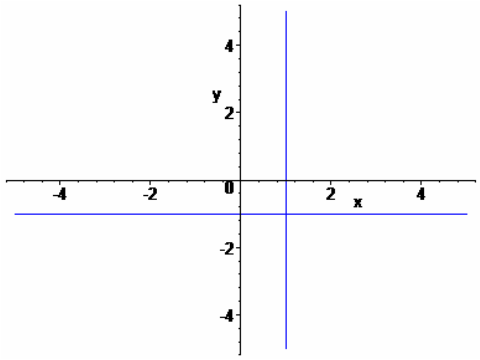
DS " Hinh cua duong thang (D) qua phep quay " ,
$A\,(x1\cos(\alpha) - y1\sin(\alpha)) + B\,(x1\sin(\alpha) + y1\cos(\alpha)) + C = 0$

" Hay : (D1) " , $(x\cos(\alpha) - y\sin(\alpha))\,A + (x\sin(\alpha) + y\cos(\alpha))\,B + C = 0$

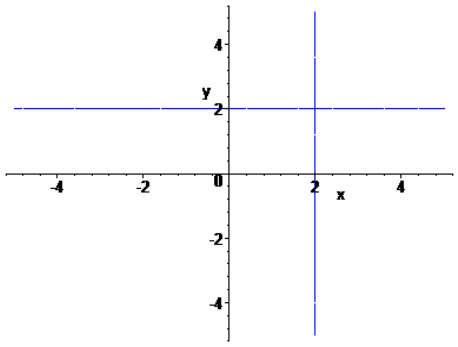
29/. " Tim hinh cua duong thang (D) " , $x - 1 = 0$, " qua phep quay mot goc a = " , $\frac{1}{2}\pi$

DS " Hinh cua duong thang (D) qua phep quay " , $-y1 - 1 = 0$

" Hay : (D1) " , $-y - 1 = 0$



30/. " Tim hinh cua duong thang (D) " , $-4 + 2y = 0$, " qua phep quay mot goc a = " , $\frac{1}{2}\pi$

DS " Hinh cua duong thang (D) qua phep quay " , $-4 + 2x1 = 0$

" Hay : (D1) " , $2x - 4 = 0$