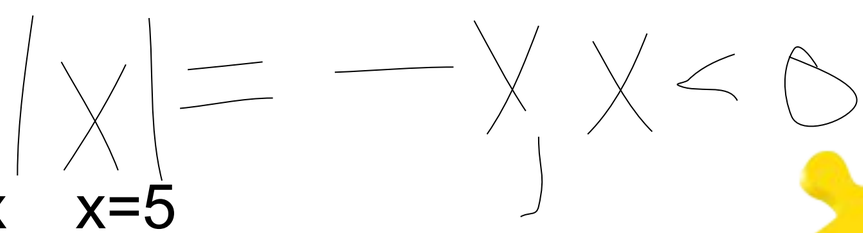
1) |3x^2 − 3x + 5| = |2x^2 + 6x − 3|

(3x^2 − 3x + 5)^2 = (2x^2 + 6x − 3)^2

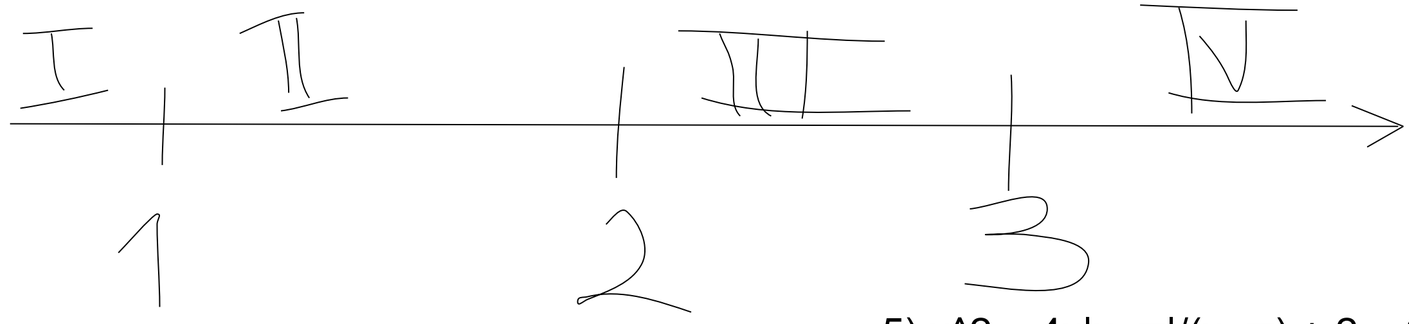
3x^2-3x+5=2x^2+6x-4
x^2-9x+9=0
D=81-36=45
x1=(9+3V5)/2
x2=(9-3V5)/2

3x^2-3x+5=-2x^2-6x+4
5x^2+3x+1=0
D=9-20=-...
корней нет
Ответ:(9+3V5)/2; (9-3V5)/2



x+5=2x x=5
(x+5)^2=(2x)^2
x+5=2x
x+5=-2x x=-5/3

3) |x − 1| − 2|x − 2| + 3|x − 3| = 4
|x − 1| + 3|x − 3| = 4+2|x-2|
(x-1)^2+2|x-1||3x-9|+(3x-9)^2=16+8|2x-4|+(2x-4)^2
x^2-2x+1+2|x-1||3x-9|+9x^2-54x+81=16+8|2x-4|+4x^2-16x+16
6x^2-40x+50 +2|x-1||3x-9| -8|2x-4|=0



1)x=<1
-(x − 1) + 2(x − 2) - 3(x − 3) = 4
-x+1+2x-4-3x+9=4
-2x+2=0
x=1
2)1<x< 2
(x − 1) + 2(x − 2) - 3(x − 3) = 4
x-1+2x-4-3x+9=4
0=0
xЭ(1;2)
3)2<=x<3
(x − 1) − 2(x − 2) - 3(x − 3) = 4
x-1-2x+4-3x+9=4
-4x+8=0
x=2

4)3<=x
(x − 1) − 2(x − 2) + 3(x − 3) = 4
x-1-2x+4+3x-9=4
2x-10=0
x=5
Ответ: xЭ[1;2] U 5

5) x^2 − 4x|x−π|/(x−π) + 2 = 0
1)x<π
x^2 + 4x(x−π)/(x−π) + 2 = 0
x^2 + 4x + 2 = 0
D/4=4-2=2
x1=-2+V2
x2=-2-V2
2)π<=x
x^2 - 4x(x−π)/(x−π) + 2 = 0
x^2 - 4x + 2 = 0
x1=2+V2
x2=2-V2
Ответ:-2-V2;-2+V2;2+V2