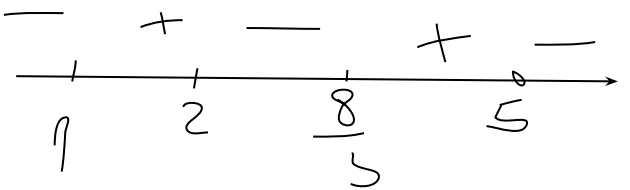
Решите неравенство

$$\frac{11-5^{x+1}}{25^x-5\left(35\cdot 5^{x-2}-2\right)}\geq 1{,}5\,.$$

5^x=t

(11-5^(x+1))/(25^x-5(35*5^(x-2)-2))>=1,5
(11-5*5^(x))/((5*5)^x-5(35*5^(x)/25-2))>=1,5
5^x=t
(11-5t)/(t^2-5(7t/5-2))>=1,5
(11-5t)/(t^2-5(7t/5-2))-1,5>=0
[(11-5t)-1,5(t^2-5(7t/5-2))]/(t^2-5(7t/5-2))>=0
[(11-5t)-3/2*t^2+3/2*5(7t/5-2)]/(t^1-5(7t/5-2))>=0
[11-5t-3t^2/2+21t/2-15]/(t^2-5(7t/5-2))>=0
[-3t^2/2+11t/2-4]/(x^2-7x+10)>=0
[-3t^2/2+11t/2-4](x^2-7x+10)=0 (x^2-7x+10)!=0
-3t^2+11t-8=0
t=1
t=8/3
t!=2
t!=5



(11-5^(x+1))/(25^x-5(35*5^(x-2)-2))>=1,5
(11-5^(x+1))/(25^x-5(35*5^(x-2)-2))-15/10>=0
(10(11-5^(x+1))-15(25^x-5(35*5^(x-2)-2)))/(25^x-5(35*5^(x-2)-2))>=0
(10(11-5^(x+1))-15(25^x-5(35*5^(x-2)-2)))>=0
(25^x-5(35*5^(x-2)-2))!=0
110-5^(x+1)*10-(15*25^x-3*35*5^(x)-150)>=0
110-5^(x+1)*10-15*5*5^(x+1)+21*5^(x+1)+150>=0
y=5^(x+1)
21*y-y*10-75*y+260>=0
-64y+260>=0
260>=64y
y<=65/16
5^(x)<=13/16
x<=log_5(13/16)

[1;2)U[8/3;5)
1<=5^x<2
0<=x<log_5(2)

8/3<=5^x<5
log_5(8/3)<=x<1

[0;log_5(2))U[log_5(8/3);1)