20. $|5x+3| > x^2+2x+3$

a) leian abs. väärtuse nullkohad

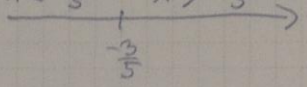
$5x+3=0$

$5x=-3$

$x=-\frac{3}{5}$

b) jaotan arvtelje osadeks

$x \leq -\frac{3}{5}$ $\quad$ $x > -\frac{3}{5}$



c) võrratuse lahendamine

1) kui $x \leq -\frac{3}{5}$, siis

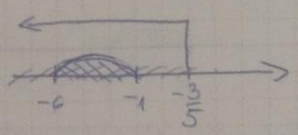
$|5x+3| = -(5x+3)$

$-(5x+3) > x^2+2x+3$

$-5x-3-x^2-2x-3>0$

$-x^2-7x-6>0 \quad /\cdot(-1)$

$x^2+7x+6<0$



Osavastus: $x \in (-6;-1)$

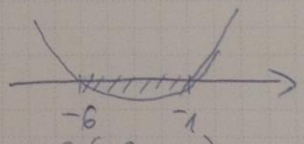
Lahendan ruutvõrrandi

$x^2+7x+6=0$

$x=-3,5 \pm \sqrt{6,25}$

$x=-3,5 \pm 2,5$

$x_1=-6 \quad x_2=-1$



$x \in (-6;-1)$

2) kui $x > -\frac{3}{5}$, siis

$|5x+3| = (5x+3)$

$5x+3 > x^2+2x+3$

$5x+3-x^2-2x-3>0$

$-x^2+3x>0 \quad /\cdot(-1)$

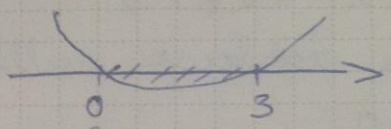
$x^2-3x<0$

Lahendan ruutvõrrangi

$x^2 - 3x = 0$

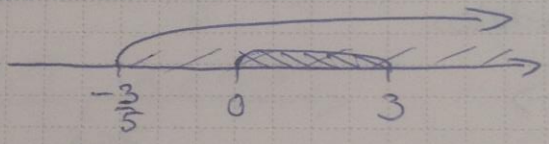
$x(x-3) = 0$

$x_1 = 0 \quad x_2 = 3$



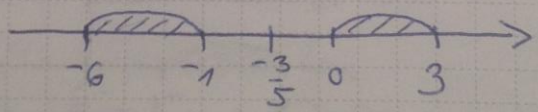
$x \in (0; 3)$

Õpetaja vastus



V: $x \in (0; 3)$

d) Õppevastus



$x \in (-6; -1) \cup (0; 3)$