

### Question 32969

One needs to solve  $\frac{x-1}{2x-1} > \frac{x-3}{2x-5}$  .

Moving right part of inequality to the left,  $\frac{x-1}{2x-1} - \frac{x-3}{2x-5} > 0$  , from which

$\frac{(x-1)(2x-5) - (x-3)(2x-1)}{(2x-1)(2x-5)} > 0$  . Opening brackets in the nominator, obtain

$$\frac{2}{(2x-1)(2x-5)} > 0 .$$

Roots of denominator are  $x=0.5; x=2.5$  . Finding the signs of  $\frac{2}{(2x-1)(2x-5)}$  on intervals

$(-\infty, 0.5); (-0.5, 2.5); (2.5, \infty)$  , obtain  $+-+$  . Hence, the solution is  $x \in (-\infty, 0.5) \cup (2.5, \infty)$  .