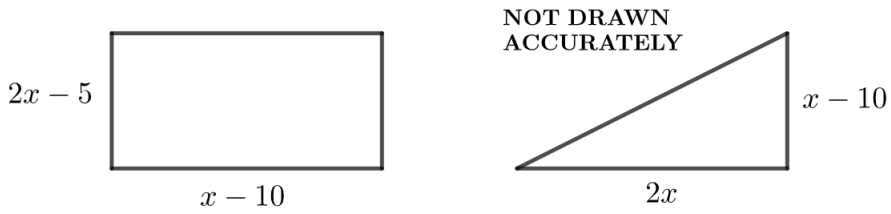
Question 1

The graph of $y = 3\,x - 2$ is translated by 3 units in the positive x-direction to give graph P.
Work out the equation of graph P.

Question 2

The area of the rectangle is greater than the area of the triangle.
Find the set of possible values of x.



Question 1

The graph of $y = 3\,x - 2$ is translated by 3 units in the positive x-direction to give graph P.
Work out the equation of graph P.

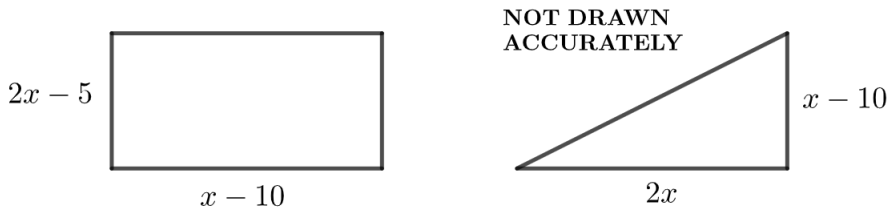
A translation of the graph of $y = f(x)$ by 3 units in the positive x-direction gives the graph of $y = f(x - 3)$.
So the equation of graph P is:

$y = 3\,(x - 3) - 2$

$= 3\,x - 11.$

Question 2

The area of the rectangle is greater than the area of the triangle.
Find the set of possible values of x.



$$(2x - 5)(x - 10) > \frac{2x(x - 10)}{2}$$

$\Rightarrow\ 2\,x^2 - 25\,x + 50 > x^2 - 10\,x$

$\Rightarrow\ x^2 - 15\,x + 50 > 0$

$\Rightarrow\ x^2 - 15\,x + 50 > 0\ \Rightarrow (x - 5)(x - 10) > 0$

$\Rightarrow\ x > 10$ (ignore $x <\ 5$ since lengths must be positive)