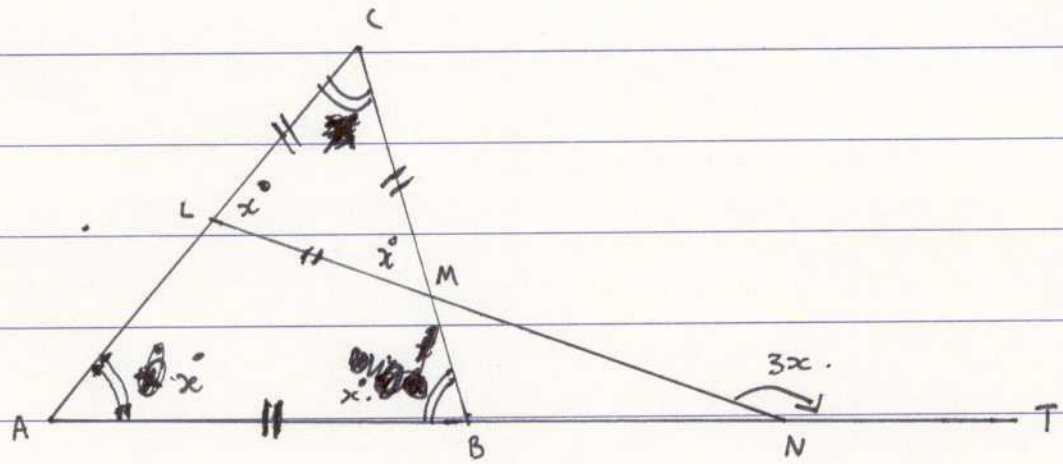
a) $3x^2 + 2x + k = 0$ Real Roots $x = 0$.

$3 \times 0^2 + 2 \times 0 + k = 0$

$0 + 0 + k = 0$

$k = 0$.

b)



Show that $\angle ABC = 180 - 2x^\circ$

$\angle CLM$ & $\angle CML$ are equal [Isosceles Triangle, (Base angles are equal)]

$\angle CAB$ & $\angle BBH$ are equal [(Isosceles triangle (Base angle are equal.

$\therefore \angle ABC = 180 - 2x^\circ$

IF angle ABC = 180 - 2x

180 - 2x - 180 = -2x

180 - 180 = 2x

0 = 2x

2x + x = 3x

(c) $y = 3\sin 2x$, $-\frac{\pi}{2}$.

$y = 3\sin 2x$

$y = 3\sin 2 \times \frac{\pi}{2}$

$y = 3\sin$