5a) $T = \dfrac{\sqrt{45}+\sqrt{20}-3\sqrt{5}+\sqrt{36}}{\sqrt{125}-\sqrt{80}+\sqrt{9}}$

$= \dfrac{\sqrt{3^2 \times 5} - \sqrt{2^2 \times 5} - 3\sqrt{5} + \sqrt{6^2}}{\sqrt{5^2 \times 5} - \sqrt{4^2 \times 5} + \sqrt{3^2}}$

$= \dfrac{3\sqrt{5} - 2\sqrt{5} - 3\sqrt{5} + 6}{5\sqrt{5} - 4\sqrt{5} + 3}$

$= \dfrac{6 - 2\sqrt{5}}{3 - \sqrt{5}}$

$= \dfrac{2(3-\sqrt{5})}{(3-\sqrt{5})}$

$\boxed{T = 2}$ which is an integer

b) $5(x+1) - \frac{3x}{2} - 1 > \frac{x}{2} - 5$

$5x + 5 - \frac{3x}{2} - 1 - \frac{x}{2} > -5$

$5x + 4 - \frac{4x}{2} > -5$

$3x > -9$

$\boxed{x > -3}$

Since, $T = 2$ is greater than -3 then it satisfies the given inequality.