Inequalities and the Half Plane

Key words:

- \> ⟶ more than, greater than, exceeds
- ≥ ⟶ at least, not less than, minimum amount *, greater than or = to*
- \< ⟶ less than, lower than, smaller than
- ≤ ⟶ at most, up to, not more than, cannot exceed, maximum amount

Determine if the point P(3,1) satisfies the following inequalities:

a) -4x + 5y - 10 ≤ 0 ?

$$-4(3) + 5(1) - 10 \leq 0 \quad \checkmark$$

$$-17 \leq 0 \quad \checkmark$$

b) x - 3y < 0

$$3 - 3(1) < 0$$

$$0 < 0 \quad NO$$

c) y > x - 2

$$1 > 3 - 2$$

$$1 > 1 \quad NO$$