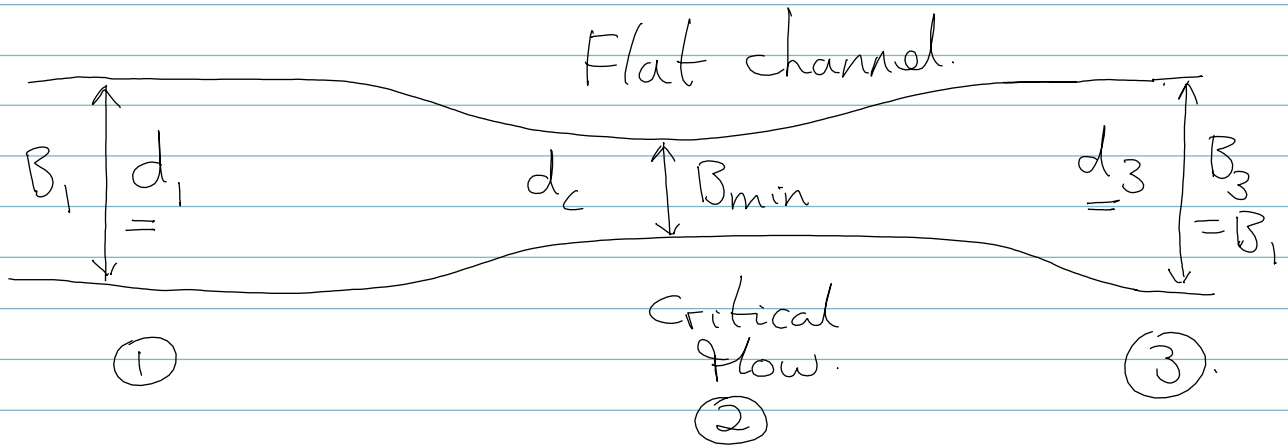
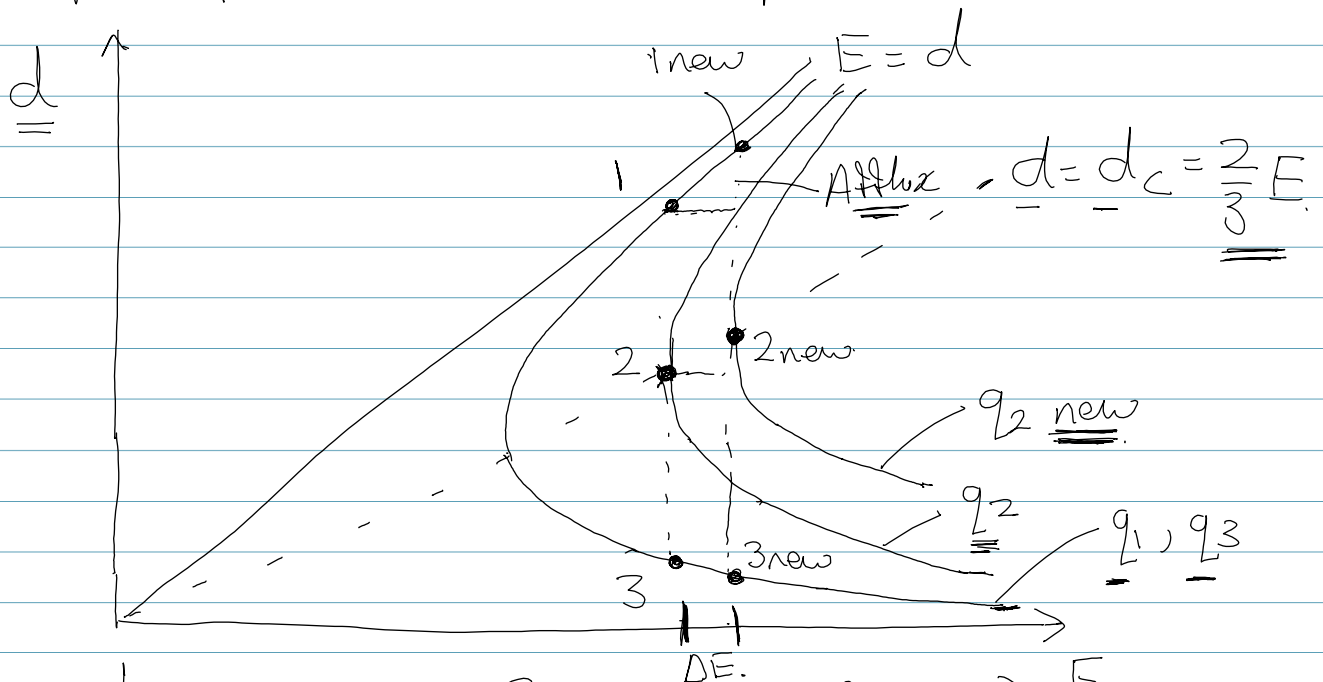


Example



Draw the specific energy diagram and plot points that correspond to (1), (2), (3).



Change in q ? $q_1, q_2, (q_1 = q_3)$ ✓

Change in $Z = \Delta Z$? No ΔZ .

$$E_1 = E_2 = E_3. \checkmark$$

What happens if the throat is narrowed further?

Flow is already critical - choke.

At this upstream $\rightarrow$ Upstream energy rises.

q in throat must increase. d_c increases in throat.

What has changed?

E increases, but $E_1 = E_2 = E_3$.

q_1 - same, q_3 same. q_2 increased.

①, ③ same curve - higher energy

② - choke - still critical flow, higher d_c on new curve.