

The effective length factor is to ~~calculate~~ ^{determine} the length of a column based on its end conditions.

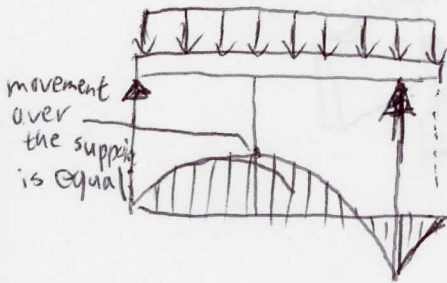
When this part buckles, the entire column fall

2.14

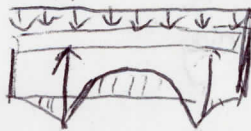
- Beam is for carry and transfer transverse loads ^{across space} to support element
- Deflection is \perp ^{perpendicular} distance ^{with} increase load and span
- Bending moment - cause part of the structure to rotate or bend to equal the sum of moment
- Resisting moment - \ominus a force couple to maintain equilibrium
- Section modulus - geometric property, inertia of the section that divided by the distance

2.15. The shape and material of a beam can determine its value.

The ends of beam is free to rotate and having no movement



- A cantilever is projecting beam support only one fixed end.
- Double Overhanging beam has moments over the supports that is equal and opposite



- Fixed end and continuous beams's \ominus value \ominus of reaction and moment is not based on span and loading but the material and shape ^{cross section}

- Heel - lower, supported end of a truss
- Panel point is joints between web and chord
To prevent secondary stresses, truss members and load need to pass common point
- Zero forces not ~~make~~ ^{make change to} the stability
- Vierendeel trusses's member is subject to nonaxial bending forces

2.16. Top and bottom chord are the important structure of a truss ~~connect~~ to allow it ^{upper and lower chord to connect}