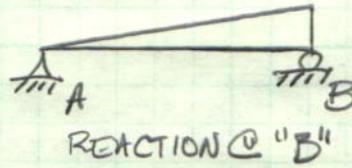
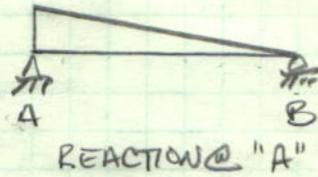
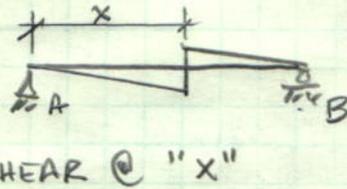


FIGURE IF 61: SIMPLY SUPPORTED SINGLE SPAN BEAM

a: REACTIONS



b: SHEAR



c: MOMENT @ MIDSPAN



d: MOMENT @ SUPPORTS

SINCE THE ENDS ARE PINNED, NO LOAD CAUSES MOMENTS AT "A" OR "B"

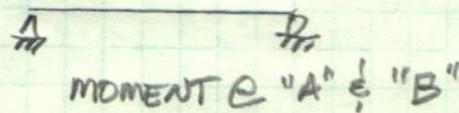
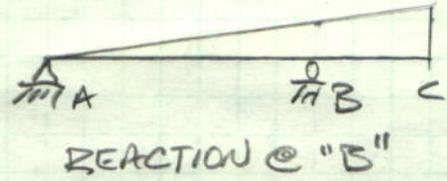
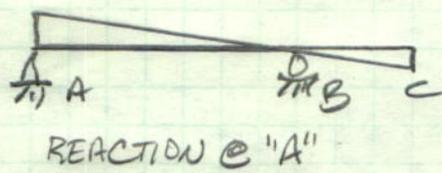
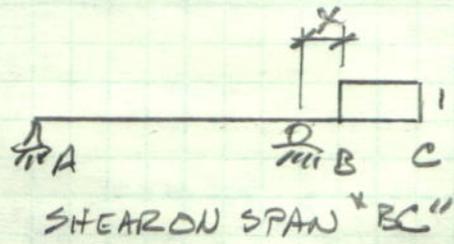
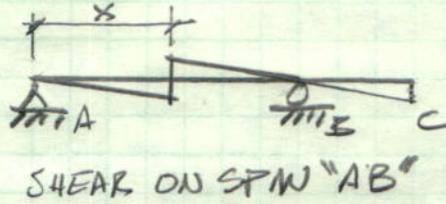


FIGURE IF 6.2: SIMPLY SUPPORTED W/ CANTILEVER END

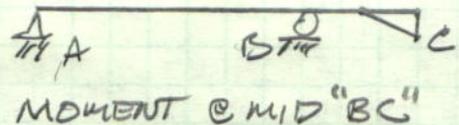
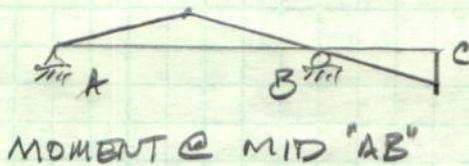
a: REACTIONS



b: SHEAR



c: MOMENT @ MIDSPAN



d: MOMENT @ SUPPORTS

SINCE "A" IS PINNED, NO LOADING WILL CAUSE MOMENT @ "A"

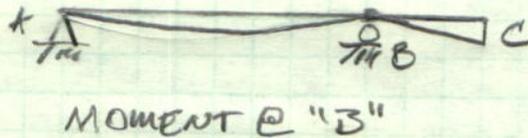
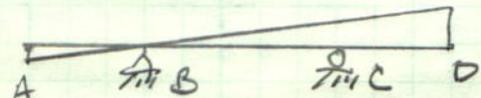


FIGURE 16.3: SIMPLY SUPPORTED W/ TWO CANTILEVER ENDS

a: REACTIONS

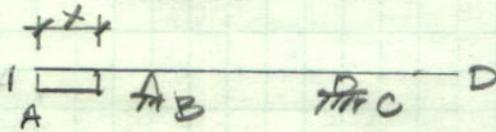


REACTION @ "B"

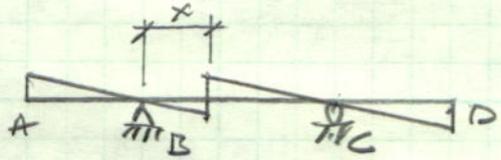


REACTION @ "C"

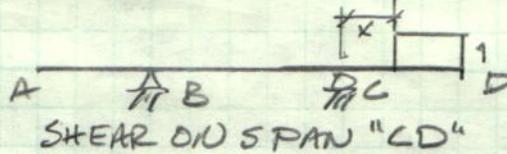
b: SHEAR



SHEAR ON SPAN "AB"

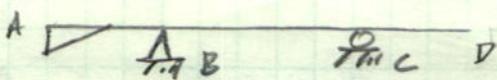


SHEAR ON SPAN "BC"

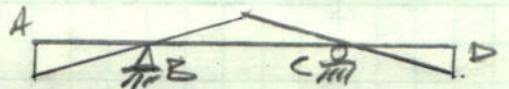


SHEAR ON SPAN "CD"

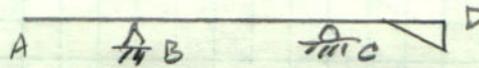
c: MOMENT @ MIDSPAN



MOMENT @ MID "AB"

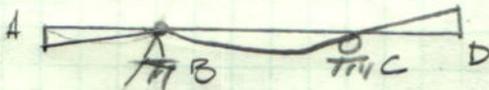


MOMENT @ MIDSPAN "BC"



MOMENT @ MIDSPAN "CD"

d: MOMENT @ SUPPORTS



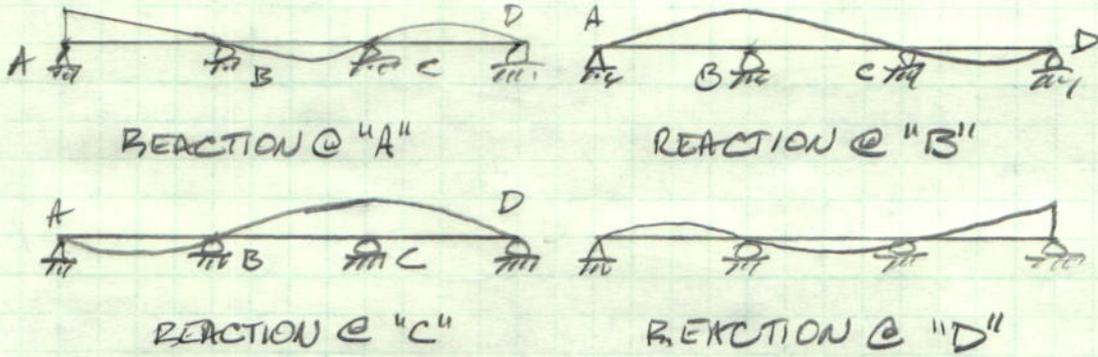
MOMENT @ "B"



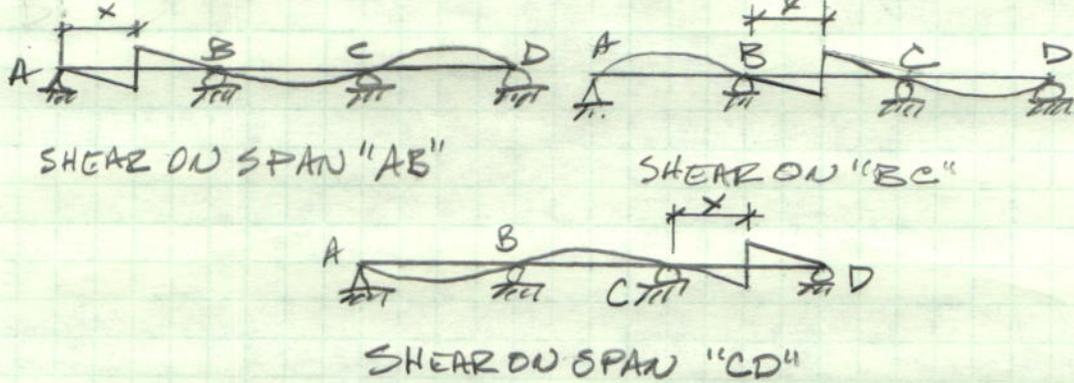
MOMENT @ "C"

FIGURE IF6.4: THE SPAN CONTINUOUS BEAM

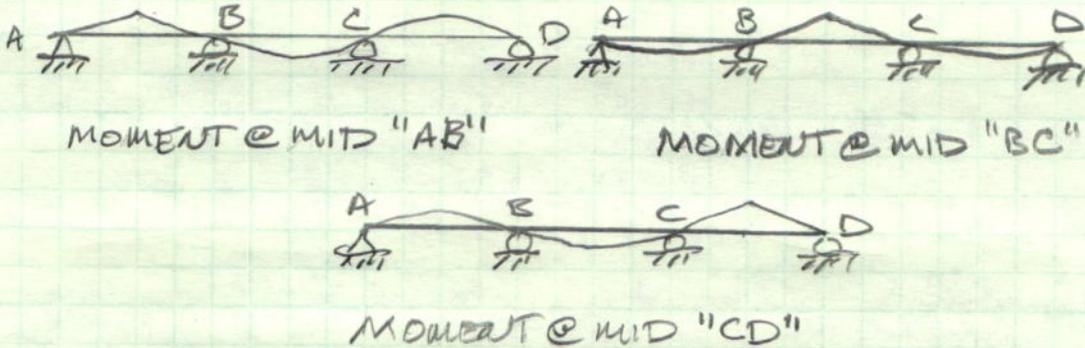
a: REACTIONS



b: SHEAR



c: MOMENT @ MIDSPAN



d: MOMENT @ SUPPORTS : "A" & "D" → NO MOMENT

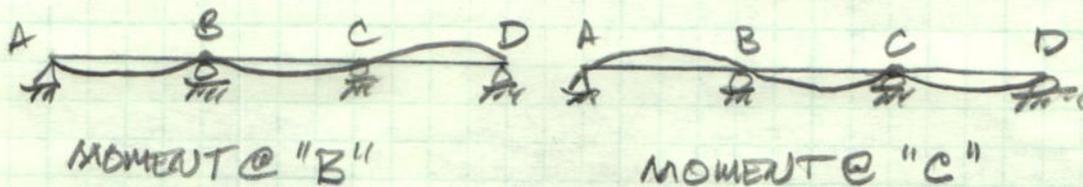
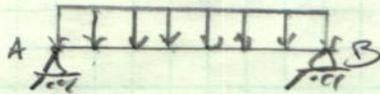
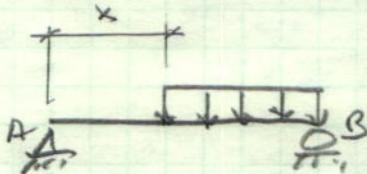


FIGURE IF 6.1: SINGLE SPAN SIMPLY SUPPORTED BEAM

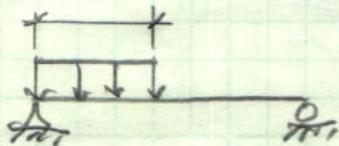
UNIQUE LOAD CASES



YIELDS MAX REACTIONS @ "A" & "B"
AND MAX. POSITIVE MOMENT EVERYWHERE ALONG THE SPAN.

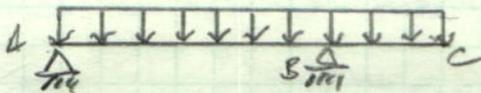


YIELDS MAX. POSITIVE SHEAR @ "x"

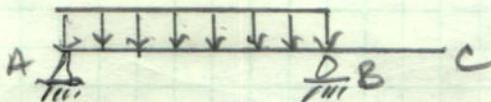


YIELDS MAX. NEGATIVE SHEAR @ "x"

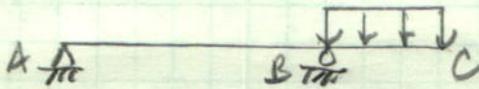
FIGURE IF 6.2: SIMPLY SUPPORTED W/ CANTILEVER END



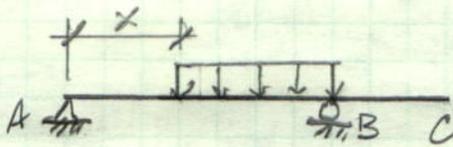
YIELDS MAX. NEGATIVE MOMENT AT "B", MAX. REACTION @ "B", MAX SHEAR ON CANT., MAX. NEG. MOMENT ON CANTILEVER



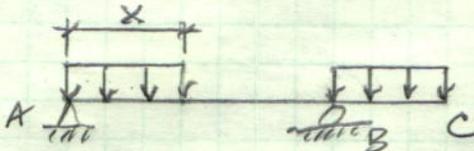
YIELDS MAX REACTION @ "A" AND MAX. POSITIVE MOMENT EVERYWHERE ON SPAN "AB"



YIELDS MAX. SHEAR AND MAX. NEGATIVE MOMENT EVERYWHERE ON SPAN "BC", MAX. NEGATIVE MOMENT ON SPAN "AB".

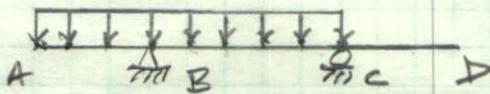


LOADING FOR MAX. POSITIVE SHEAR @ "x"

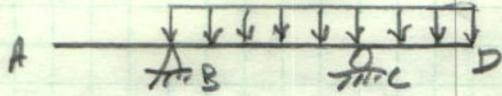


LOADING FOR MAX. NEGATIVE SHEAR @ "x"

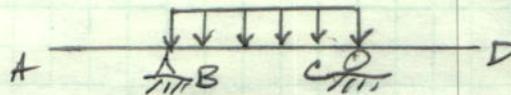
FIGURE 1F 6.3: SIMPLY SUPPORTED w/ TWO CANTILEVER ENDS



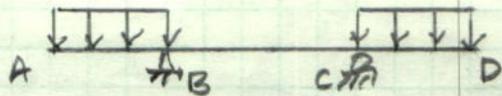
- MAX. UPWARD REACTION @ "B"
- MAX NEG. SHEAR ON SPAN "AB"
- MAX NEG. MOMENT ON SPAN "AB"
- MAX NEG. MOMENT AT "B"



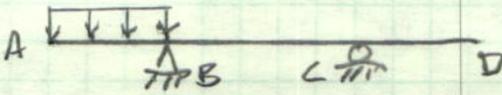
- MAX. UPWARD REACTION @ "C"
- MAX. POS. SHEAR ON SPAN "CD"
- MAX. NEG. MOMENT ON SPAN "CD"
- MAX. NEG. MOMENT AT "C"



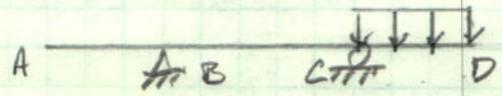
- MAX. POS. MOMENT EVERYWHERE ON SPAN "BC"



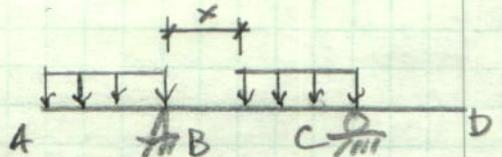
- MAX. NEG. MOMENT EVERYWHERE ON SPAN "BC"
- MAX. SHEAR & MOMENT ON SPANS "AB" AND "CD"



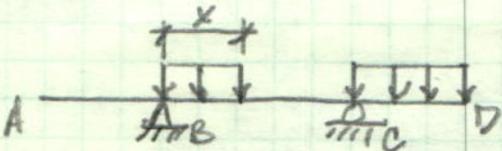
- MAX. DOWNWARD REACTION @ "C"
- MAX. SHEAR & NEG. MOMENT ON SPAN "AB"
- MAX. POS. MOMENT @ "C"



- MAX. DOWNWARD REACTION @ "B"
- MAX. SHEAR & NEG. MOMENT ON SPAN "CD"
- MAX. POSITIVE MOMENT @ "B"

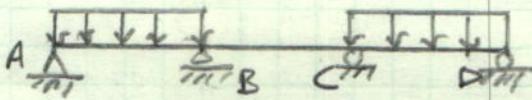


- MAX POS. SHEAR @ "X"

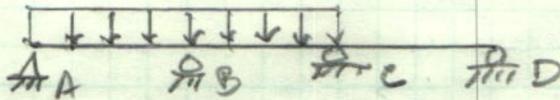


- MAX. NEG. SHEAR @ "X"

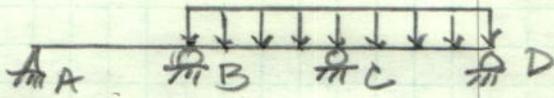
FIGURE 1F 6.4: 3-SPAN CONTINUOUS BEAM



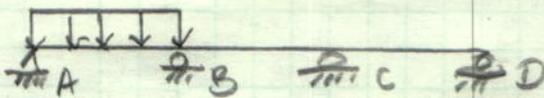
- MAX. UPWARD REACTION @ "A" & "D"
- MAX. POS. MOMENT ON SPANS "AB" & "CD"



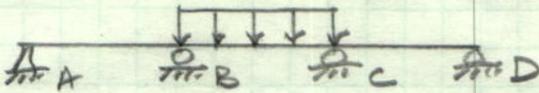
- MAX. UPWARD REACTION @ "B"
- MAX. NEG. MOMENT @ "B"



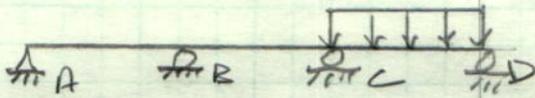
- MAX. UPWARD REACTION @ "C"
- MAX. NEG. MOMENT @ "C"



- MAX. DOWNWARD REACTION @ "C"
- MAX. POS. MOMENT @ "C"



- MAX. DOWNWARD REACTION @ "A" & "D"
- MAX. POS. MOMENT ON SPAN "BC"
- MAX. NEG. MOMENT ON SPANS "AB" & "CD"



- MAX. DOWNWARD REACTION @ "B"
- MAX. POS. MOMENT @ "B"

SHEAR LOAD CASES:

