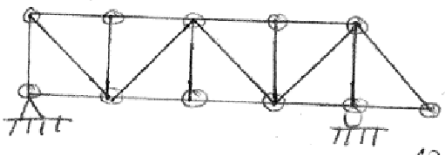
PROB #6.1



$m = 19,\ j = 11,\ r = 3$ (3 furnished)

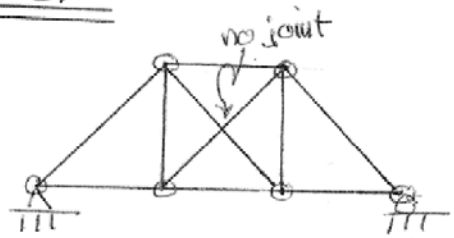
$m = 2j - r$

$19 = 2(11) - 3 = 19$

∴ Its statically determinate internally and externally

rgcm

PROB #6.2



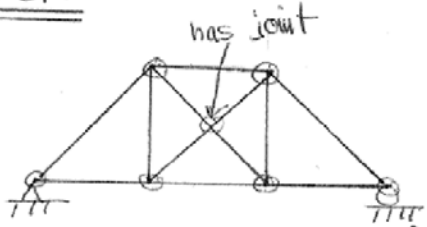
$m = 10,\ j = 6,\ r = 3$ (3 furnished)

$m = 2j - r$

$10 > (2)(6) - 3 = 9$

∴ Its stat. indeterminate internally to 1st degree

PROB#6.3



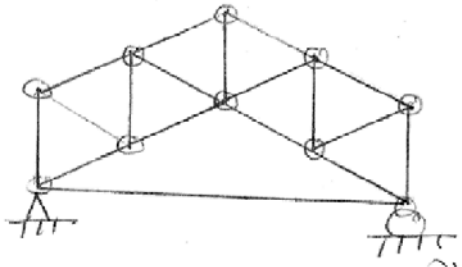
$m = 12$, $j = 7$, $r = 3$ (3 furnished)

$m = 2j - r$

$12 > (2)(7) - 3 = 11$

∴ Its statically indeterminate internally to 1st degree

PROB # 6.4



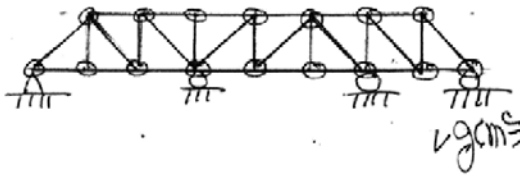
$m = 18 \quad j = 10 \quad r = 3$ (3 furnished)

$m = 2j - r$

$18 > (2)(10) - 3 = 17$

∴ Its stat. indeterminate internally to 1st degree

PROB #6.5



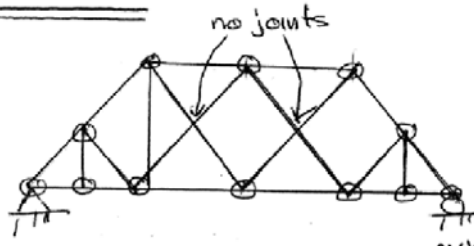
$m = 29$, $j = 16$, $r = 3$ (5 furnished)

$m = 2j - r$

$29 = (2)(16) - 3) = 29$

Its statically indeterminate externally to 2nd degree

PROB# 6.6



$m = 21$, $j = 12$, $r = 3$ (3 farm)

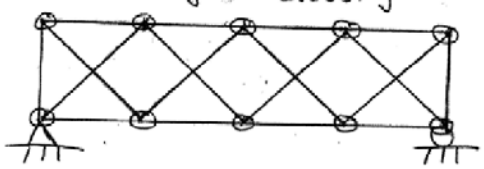
$m = 2j - r$

$21 = (2)(12) - 3 = 21$

$\therefore$ Its statically determinate externally and internally

Prob # 6.7

no joints @ diagonal crossings



$m = 18,\ j = 10,\ r = 3$ (3 furnished)

$m = 2j - r$

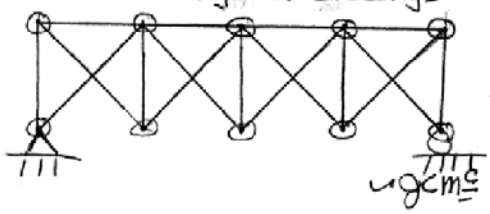
$18 > (2)(10) - 3 = 17$

∴ Its statically indet. internally to 1st degree

$\sum M_C =$

PROB #6.8

no joints @ diagonal crossings



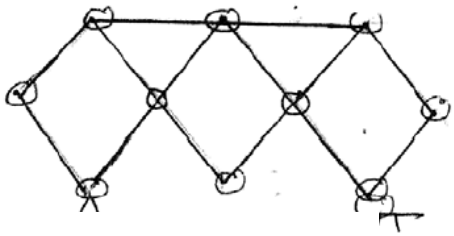
$m = 17, j = 10, r = 3$ (3 furnished)

$m = 2j - r$

$m = (2)(10) - 3 = 17$

∴ Stat det. internally and externally

PROB# 6.9



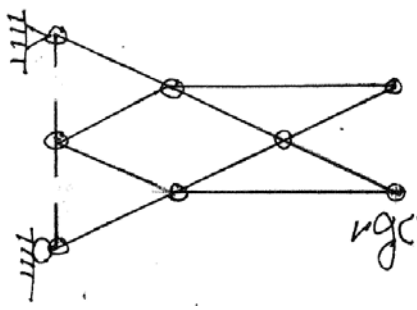
$m = 14, j = 10, r = 3$ (3 furn.)

$m = 2j - r$

$14 < (2)(10) - 3 = 17$

$\therefore$ Its unstable

PROB # 6.10



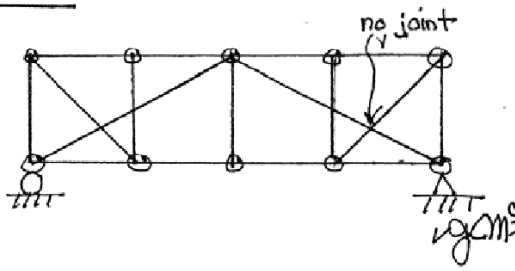
$m = 12, j = 8, r = 3$ (furn.)

$m = 2j - r$

$12 < (2)(8) - 3 = 13$

$\therefore$ Its unstable

PROB #6.11



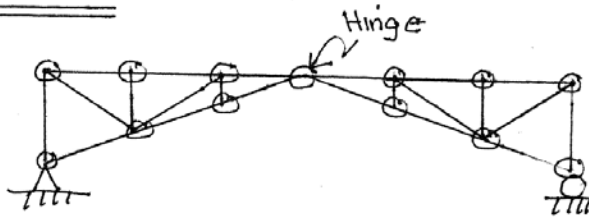
$m = 17,\ j = 10,\ r = 3$ (3 furn.)

$m = 2j - r$

$17 = (2)(10) - 3 = 17$

∴ Its stat. determinate internally and externally

PROB# 6.12



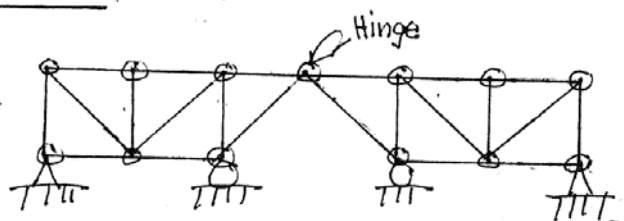
$m = 22, j = 13, r = 4$ (3-turn)

$m = 2j - r$

$22 = (2)(13) - 4 = 22$

$\therefore$ Its unstable externally

PROB #6.13



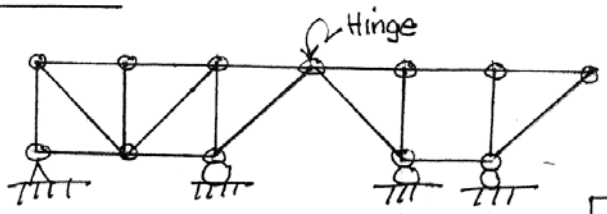
$m = 2j - r = 13, r = 4$ (6 from)

$m = 2j - 4$

$22 = (2)(13) - 4 = 22$

∴ Its statically indet. externally to 2nd degree

PROB # 6.14



$m = 19$, $j = 12$, $r = 5$ (5 fixed)

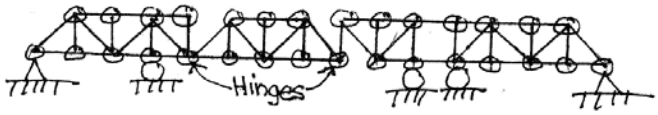
$m = 2j - r$

$19 = 24 - 5 = 19$

$\therefore$ Its statically det. internally and externally

$\sim g.m^2$

PROB #6.15



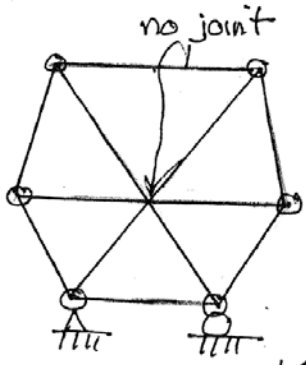
$m = 53, j = 30, r = 7$ (7 farn.)

$m = 2j - r$

$53 = (2)(30) - 7 = 53$

$\therefore$ Its stat det. intern. and externally

PROB #6.16



$m = 9,\ j = 6,\ r = 3$ (3 furnished)

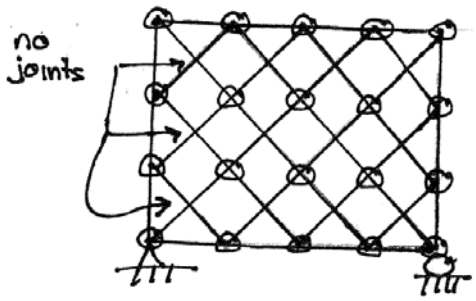
$m = 2j - r$

$9 = (2)(6) - 3 = 9$

∴ Its stat. determinate externally and internally

$r + m \geq 2j$

PROB #6.17



$m = 38, j = 20, r = 3$ (3 furn.)

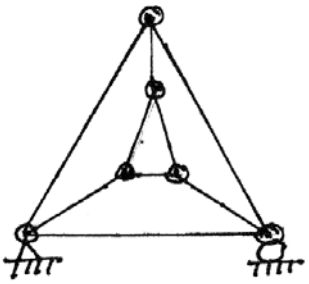
$m = 2j - r$

$38 > (2)(20) - 3 = 37$

∴ Its stat indet. internally to 1st degree

✓ g.c.m.e

PROB # 6.18



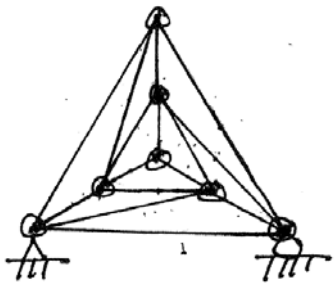
$m = 9, j = 6, r = 3$ (3 furnished)

$m = 2j - r$

$9 = (2)(6) - 3 = 9$

∴ Its stat. determinate internally and externally

PROB #6.19



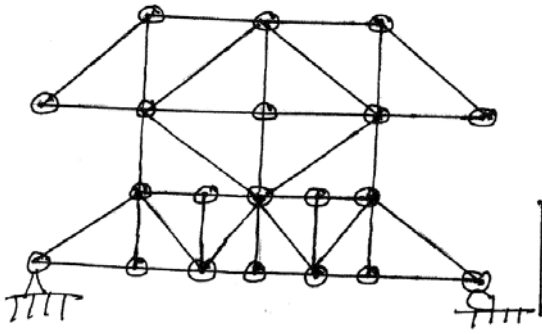
$m = 15 \quad j = 7, r = 3$ (3 furn.)

$m = 2j - r$

$15 > (2)(7) - 3 = 11$

∴ Its stat. indeterminate internally to 4th degree

PROB #6.20



$m = 39,\ j = 20,\ r = 3$ (3 furn.)

$m = 2j - r$

$39 > (2)(20) - 3 = 37$

∴ Its stat indet. internally to 2nd. degree

rgcmc