



REACTIONS "EXACT"
PER CONTINUOUS BEAM
ANALYSIS.

APPROX METHOD FOR EXCEL: (VERY MINIMAL PROGRAMMING)

$$\begin{array}{l}
 1.5 \times 9 = 13.5 \text{ k} \\
 0.75 \times 4.5 = 3.375 \text{ k} \leftarrow \text{COMPUTE REACTION @ SUPPORT} \\
 \text{TOTAL} = 13.5 \\
 \quad \quad \quad 3.375 \\
 \hline
 16.875 \text{ k (LET'S CALL THIS RZSS)}
 \end{array}$$

(2) ASSUMING 2-SS SPANS

RATIO OF TOTAL LOAD IN SPAN (1)-(2) DIVIDED BY TOTAL LOAD OF SPAN (2)-(3):

SINCE UNIFORM LOAD, THIS IS MERELY $\frac{1.5}{0.75} = 2.00$ ← CELL C4

RATIO OF SPAN (1)-(2) DIVIDED BY SPAN (2)-(3) = $\frac{18}{9} = 2.00$ ← CELL D4

INTERMEDIATE FORMULAE ARE IN CELLS F4:F7

(SEE ATTACHED EXCEL "CBEAM w SCALING RATIO")

SCALING RATIO = 1.41 (SEE CELL H4)

REACTION @ (2) = $1.41 \times 16.875 \text{ k} = 23.75 \text{ k}$ ← COMPARE TO "EXACT" = 24.05 k
 ↑
 RZSS