

Name: _____

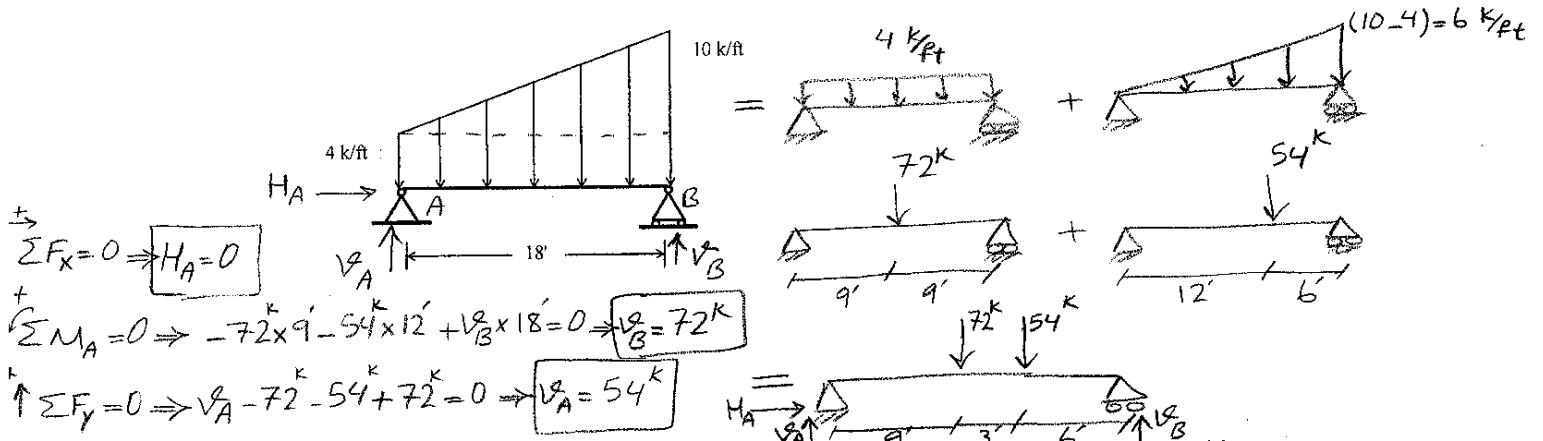
In-Class Problems #1

1. What does it mean for a structure to be considered *statically determinate / indeterminate*

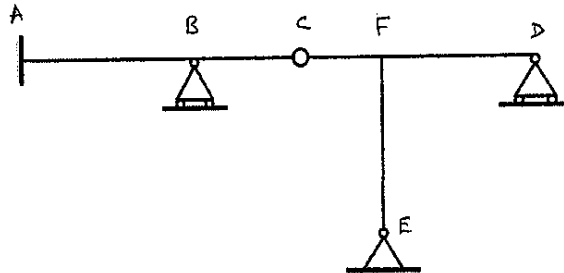
Determinate: All reactions and internal forces in the structure can be determined from equilibrium equations.

Indeterminate: More unknown reactions and internal forces than equilibrium.

2. Draw the resultant forces due to the distributed loading



3. Classify the structure as statically determinate, statically indeterminate, or unstable



$r = \Sigma r = 3 + 1 + 2 + 2 + 1 = 9$

$n = 2 \Rightarrow 3n = 6$

$r = 9 > 3n = 6$

\Rightarrow Statically Indeterminate to the 3rd degree

Degree of indeterminacy = $r - 3n = 9 - 6 = 3$

