

Carnegie Mellon

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Strength Reduction Algorithm

- For each induction variable A, (A = c_1 *B+ c_2 at time of definition)

• variable A' holds expression c1*B+c2 at all times

- Definition of A does not need to refer to B

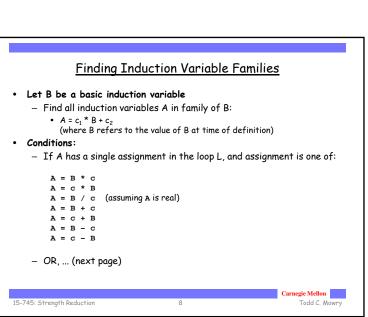
• replace definition of A with A=A' only when executed

• Key idea:

Result:

15-745: Strength Reduction

Program is correct



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