

## The Farmer and Two Ranchers

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Our farmer Jack is surrounded by two ranchers, Bill and Jill. Bill's ranch is the north side of the farm and Jill's is on the south side. If a fence is not built, straying cattle will cause a total of \$16,000 in damages, \$8,000 from Bill's cattle and \$8,000 from Jill's cattle. The farmer can build a fence for \$10,000 that would eliminate all damages. A partial fence protecting only one side of the farm would not be sufficient. Cattle from the ranch on the south side could easily stray onto the north side of the farm. Bill could keep his cattle from roaming by spending an additional \$6,000 on enclosures; the same is true for Jill.

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### Questions

1. What is the efficient solution to this problem? What is the second best solution?
2. Describe the nature of the solution given rancher's rights and given cattlemen's rights?
3. Given transactions costs is it more likely that one system of right's has a greater probability of producing an efficient solution?
4. Suppose it cannot be determined which rancher's cattle destroy the farmer's crops. What impact does this have on the possibility of an efficient solution?

