

If p = the number of people, then they are charged $40p$ dollars for the dinners, plus the \$280 for the room. So $40p + 280 = 1,500$. Subtract 280 from both sides: $40p = 1,220$. Divide both sides by 40: $p = 30.5$. The company cannot invite a half a person, so they can invite at most 30 people.