Homework Solutions
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Exercise 5

(a) There are 4 females and 4 males. In the pairing, we must pair male with male and female with female. The possible female pairings are

Kerri	Emily	Monica	Sonya
Kerri	Monica	Emily	Sonya
Kerri	Sonya	Emily	Monica

and the possible male pairings are

Ronald	Lee	Kyle	Pablo
Ronald	Kyle	Lee	Pablo
Ronald	Pablo	Lee	Kyle

Furthmore, any female pairing can be joined with any male pairing for a total of $3 \times 3 = 9$ possibilities.

(b) There are only two 18-year-olds, so they must be paired with each other. And there are only two 20-year-olds, so they must be paired with each other. There are four 19-year-olds. They can be paired in the following ways.

Emily	Lee	Pablo	Monica
Emily	Pablo	Lee	Monica
Emily	Monica	Lee	Pablo

(c) There are various ways to do this. Here is one way. Having listed the possible pairings of males and of females in part (a), I could label the pairings in each group 1, 2, 3. Then use `randInt(1,3)` to select one from each group. Using a see of 18, I get female pairing #2 and then male pairing #2, so the complete pairing is

Kerri	Monica	Emily	Sonya
Ronald	Kyle	Lee	Pablo

(d) Having listed the 3 possible pairings of 19-year-olds, I will label those pairings 1, 2, 3. Then use `randInt(1,3)` to select one of them at random. Using a seed of 28, I get 3, so I will use the third pairing above. My pairing is

Emily	Monica	Lee	Pablo
Kerri	Sonya	Ronald	Kyle