R5.1

a. n = 1, k = 2, r = 1
b. n = 1, k = 2, r = 2
c. n = 1, k = 1, r = 2
d. n = 1, k = 6 , r = 3

R5.12

start1 = 10
end1 = 12
start2 = 11
end2 = 13
start1 (10) IS NOT greater than *start2* (11), so *s* = *start2* = 11
end1 (12) IS lesser than *end2* (13), so *e* = *end1* = 12

s (11) IS lesser than *e* (12),
so "The appointments overlap."

start1 = 10
end1 = 11
start2 = 12
end2 = 13
start1 (10) IS NOT greater than *start2* (12), so *s* = *start2* = 12
end1 (11) IS lesser than *end2* (13), so *e* = *end1* = 11

s (12) IS NOT lesser than *e* (11),
so "The appointments don't overlap."

R5.16

Boundary Cases:

Non-overlapping:
- 0-1 and 1-2
- 23-0 and 22-23

Overlapping:
- 0-1 and 0-2
- 23-0 and 22-0

Normal Cases:

Non-overlapping:
- 2-3 and 6-7

Overlapping:
- 5-6 and 3-8