A

(1)

(2) ligation at ter

daughter 1

daughter 2
**B Overreplication Scenario 1: Strand Displacement & Switching**

(1) Stop of Replication at Terminus

(2) Overreplication and Strand Displacement

(3) Strand Switching
(4) Overreplication – Elongation Leading Strand (blue)

(5) Overreplication – Elongation Lagging Strand (red)

(6) Endonucleolytic Cleavage (single stranded DNA)
(7) Ligation of Leading & Lagging Strand

(8) Result: 2 Chromosomes & 1 linear Fragment
C Overreplication Scenario 2: Collision outside ter

(1) Overreplication of right fork and collision

(2) Strand break

(3) Overreplication (template switching and fork reversal)
(4) Site specific recombination by XerCD (plus strand)

XerCD recombination at dif

Daughter chromosome 1

Excised fragment

(5) Site specific recombination by XerCD (minus strand)

XerCD recombination at dif

Daughter chromosome 2

Excised fragment