What is your favorite fall food?

## Radical Properties

Increasing Stability

[Drawings of radical structures]

10.2 Draw resonance structures for each of the following radicals:

[Drawings of resonance structures]

10.5 Identify the weakest C−H bond in each of the following compounds:

[Structures with highlighted bonds]

## Mechanisms

**INITIATION**

-(hv)- \( \text{Br} - \text{Br} \rightarrow \text{Br} \cdot + \text{Br} \)

**PROPAGATION**

\( \text{Br} \cdot + \text{HBr} \rightarrow \text{Br} + \text{HBr} \)

**TERMINATION**

\( \text{Br} \rightarrow \text{Br} \)

10.8 Draw the appropriate fishhook arrows for each of the following radical processes.

(b) 

10.12

6a) The tertiary position is expected to undergo selective bromination, giving the following alkyl bromide:

[Drawings of brominated structures]

(b) The tertiary position is expected to undergo selective bromination, giving the following alkyl bromide:

[Drawings of brominated structures]
10.12 Predict the major product obtained upon radical bromination of each of the following compounds:

(a) ![Chemical Structure](image)

(b) ![Chemical Structure](image)

(c) ![Chemical Structure](image)

Adding multiple products to one location for alkyne synthesis