Choose the correct statement about the following E2 reactions of isomeric reactants.

A. Reaction (1) is faster than (2)
B. Reaction (2) is faster than (1)
C. Both reactions occur at the same rate
D. Neither of these reactions can occur as shown

Which of the following reactions goes faster? Why?

A. Reaction (1) is faster than (2)
B. Reaction (2) is faster than (1)
C. Both reactions occur at the same rate
D. Neither of these reactions can occur as shown

What is the structure for compound X based on the following data?

Molecular formula of $X = C_6H_{12}$

What can we conclude from this data?

Ozonolysis of $X$ gave two compounds, $Y$ (CH$_2$O) and $Z$ (C$_5$H$_{10}$O)
The nmr spectrum of $Z$ is given below:

Molecular formula of $X = \text{C}_6\text{H}_{12}$
Ozomalolysis of $X$ gave two compounds, $Y$ (CH$_2$O) and $Z$ (C$_5$H$_{10}$O)

The nmr spectrum of $Z$ is given below:

Methyl vinyl ketone reacts with methylbromide in the presence of an amine base to give either $A$ or $B$.

Z = Methyl vinyl ketone reacts with methylbromide in the presence of an amine base to give either $A$ or $B$.
From the following $^1$H NMR spectrum, what is the structure of the product of this reaction?

What is the mechanism of the following reaction?

How many lines would be predicted for the $^1$H NMR spectrum of methyl group of ethyl vinyl ketone?

What is the product of the following reaction?

$^1$HNMR spectrum for the product of the above reaction
What is the product of the following reaction?

- A
- B

1H NMR spectrum for the product of the above reaction

How does this reaction work?

Why is the RO–OR bond very weak?

157 kJ/mol

This is a free radical chain reaction mechanism.

Only one Br• is needed for a complete reaction

Is the first step the reaction of H⊕ with the C=C?

A. yes  B. no
Can one control the addition of H-Br to alkenes?

Which compound has the larger bond dissociation energy (BDE)? Why?

Which compound is more acidic ($K_a$)? Why?

$pK_a$

BDE