What is the first step?

What is the mechanism of the following reaction?

What is the first step?

What is the second step?

What is the final product in step 1?

Why does this reaction give the product shown?

The Stars of Orgo

AWARDS!
How could isoprene be converted into $\beta$-ionone?

$\text{isoprene} \rightarrow \text{$\beta$-ionone}$

What is the product of the following reaction?

$\text{A} \quad \text{B} \quad \text{C}$
What is the product of the following reaction?

How could the following transformation be accomplished?

What is the product of the next reaction?

How could the next transformation be accomplished?

What is the product of the next reaction?

How could the following transformation be accomplished?
How could the following transformation be accomplished?

\[ \text{How could the following transformation be accomplished?} \]

\[ \begin{align*}
\text{H}_{2}\text{C=CH}_2 & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \rightarrow \beta\text{-ionone} \\
\text{H} & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H} & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H} & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H} & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H} & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\end{align*} \]

What is the mechanism for the following reaction?

\[ \text{What is the mechanism for the following reaction?} \]

\[ \begin{align*}
\text{H}_{2}\text{C=CH}_2 & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\end{align*} \]

What is the mechanism for the formation of \( \beta \)-ionone?

\[ \text{What is the mechanism for the formation of \( \beta \)-ionone?} \]

\[ \begin{align*}
\text{H}_{2}\text{C=CH}_2 & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\end{align*} \]

What is the aldo reaction?

\[ \text{What is the aldo reaction?} \]

\[ \begin{align*}
\text{H}_{2}\text{C=CH}_2 & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\end{align*} \]

What is the product of the following aldo reaction?

\[ \text{What is the product of the following aldo reaction?} \]

\[ \begin{align*}
\text{H}_{2}\text{C=CH}_2 & \rightarrow \text{H}_{2}\text{C=CHCH=CH}_2 \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\text{H}_{2}\text{C=CHCH=CH}_2 & \rightarrow \beta\text{-ionone} \\
\end{align*} \]
What is the product of the following aldol reaction?

Using the aldol reaction what reactant would give the following ketone?

Using the aldol reaction what reactant would give the following ketone?