

Student 1

General feedback

Strong and almost complete performance: the answers match the key across the paper. The only lost point is the missing branched-alkane degree-of-unsaturation response.

What to work on

1. For criterion 2b (branched alkane), add its degree of unsaturation: this saturated acyclic alkane has DOU 0.

1a	Methane bond angle	1 / 1
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1b	IUPAC name for isobutane	1 / 1
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1c	Gauche butane interaction	1 / 1
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1d	Ethane rotation barrier	1 / 1
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1e	Ethane pKa	1 / 1
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2a	Provide line drawings	6 / 6
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2b	Degrees of unsaturation	2 / 3
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How to improve

- For criterion 2b (branched alkane), add its degree of unsaturation: this saturated acyclic alkane has DOU 0.

3a	Lone pairs	3 / 3
3b	Atom hybridization	2 / 2
3c	Bond angle	1 / 1
3d	Orbital picture	3 / 3
3e	Nucleophilic or electrophilic	2 / 2
4	Compare pK_a values	8 / 8
5	Newman projection conformers	4 / 4
6a	Reaction a	2 / 2
6b	Reaction b	2 / 2
6c	Bronsted base	1 / 1
6d	Lewis acid	1 / 1
7a	Major resonance structure	8 / 8
7b	Curved arrows	8 / 8

8a Products with BF_3

4 / 4

8b Compare product stability

2 / 2