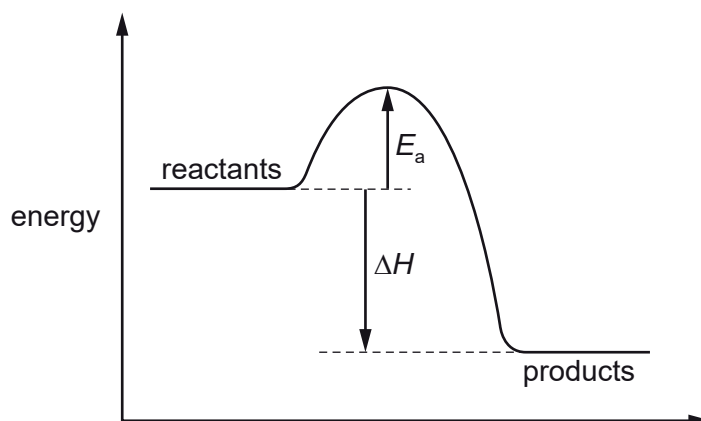


ENERGY LEVEL DIAGRAMS

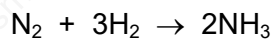
1 The energy level diagram for a reaction is shown.



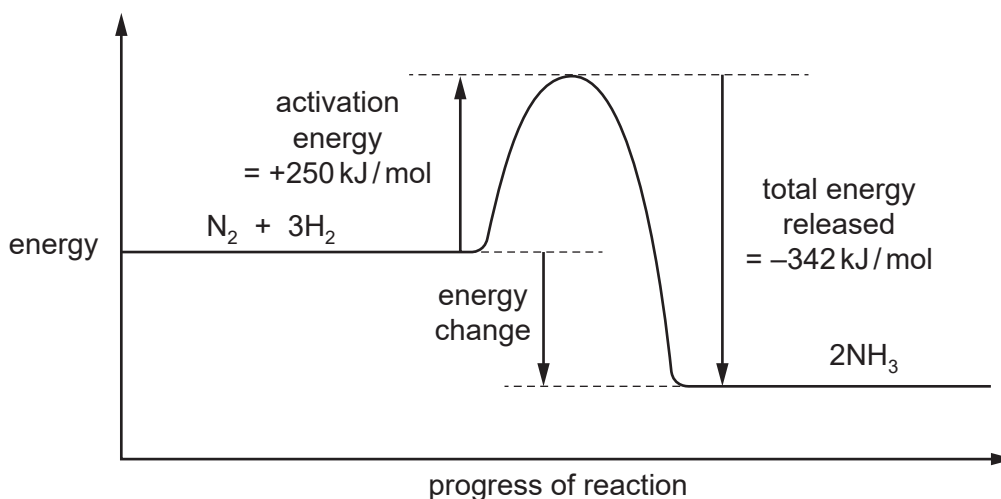
Which row is correct?

	sign of ΔH	overall energy change	sign of E_a
A	-	exothermic	-
B	+	endothermic	+
C	+	endothermic	-
D	-	exothermic	+

2 The equation for the formation of ammonia is shown.



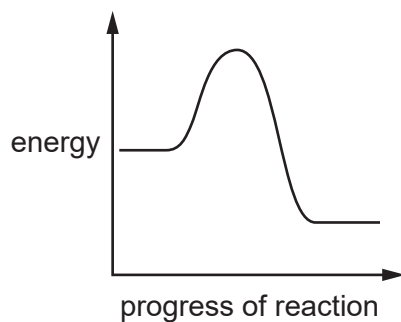
The energy level diagram for the reaction is shown.



What is the energy change for the reaction?

- A** -592 kJ/mol
- B** -92 kJ/mol
- C** +92 kJ/mol
- D** +592 kJ/mol

3 An energy level diagram for a reaction is shown.

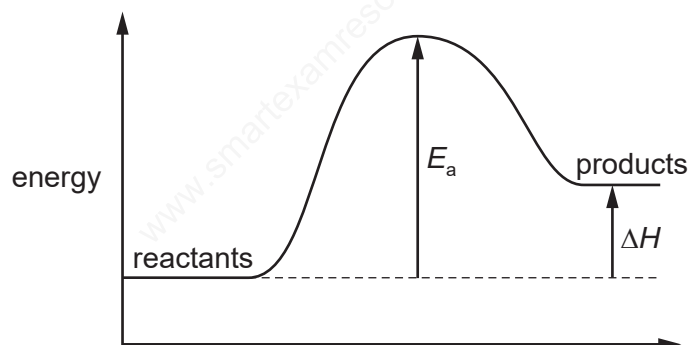


Which statement and explanation about this reaction are correct?

	statement	explanation
A	the reaction is endothermic	the products have more energy than the reactants
B	the reaction is endothermic	the products have less energy than the reactants
C	the reaction is exothermic	the products have more energy than the reactants
D	the reaction is exothermic	the products have less energy than the reactants

8

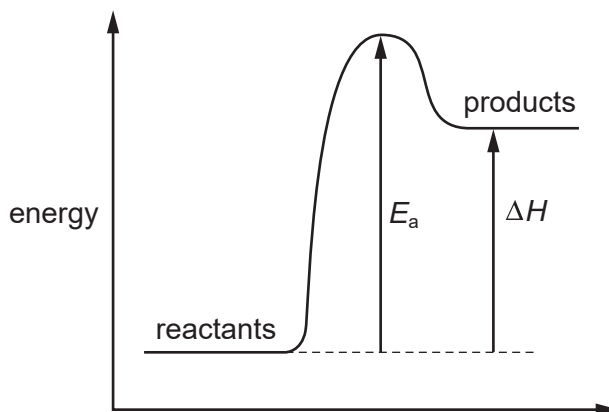
4 The energy level diagram for a reaction is shown.



Which statement is **not** correct for this energy level diagram?

- A** It could be the energy level diagram for the reaction when petrol is burnt.
- B** Less energy is released in bond forming than is needed for bond breaking.
- C** The activation energy, E_a , has a positive value.
- D** The energy change, ΔH , for the reaction is positive.

5 The energy level diagram for a reaction is shown.



Which row is correct?

	sign of ΔH	overall energy change	sign of E_a
A	-	exothermic	-
B	+	endothermic	+
C	+	endothermic	-
D	+	exothermic	+

6 Which diagram is a correctly labelled energy level diagram for an endothermic reaction?

