Energy Changes — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **A cheese pizza is cooked in an oven. How is energy transferred in the oven?**

- A by condensation on the oven walls
- B by radiation and convection
- C by conduction only, through the tray
- D by evaporation from the cheese

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2 **An ice cream cone melts. What is the melting point of the ice cream?**

- A around 0 degrees Celsius
- B around minus 20 degrees Celsius
- C around 37 degrees Celsius
- D around 100 degrees Celsius

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3 **A cup of coffee is left for an hour. What happens to its temperature?**

- A it rises above room temperature
- B it stays the same all day
- C it falls to room temperature
- D it falls to zero degrees

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4 **A sandwich is eaten. Which enzyme digests the starch in the bread?**

- A protease
- B pepsin
- C lipase
- D amylase

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5 **A chocolate cake is made from flour, sugar and eggs. Which ingredient provides protein?**

- A water
- B sugar
- C flour
- D eggs

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6 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

- A above normal
- B exactly normal
- C impossible to tell
- D below normal

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7 **In a reaction, the energy needed to break bonds is 1500 kJ and the energy released making bonds is 1300 kJ. Is the reaction exothermic or endothermic?**

A endothermic, more energy is taken in

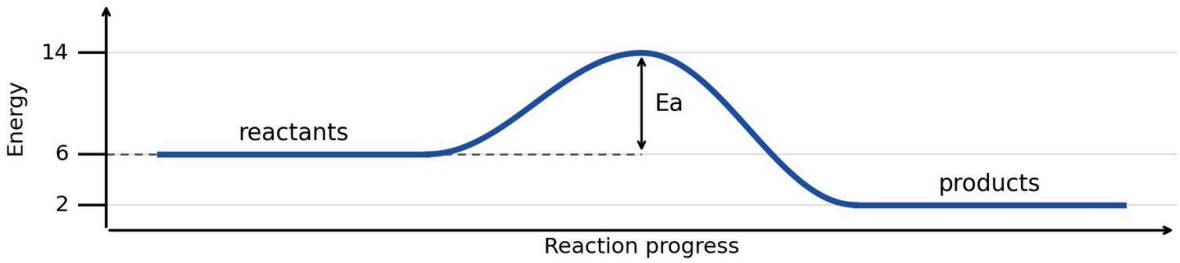
B exothermic, more energy is taken in

C endothermic, more energy is given out

D exothermic, more energy is given out

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8 **The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 14 and the products are at 2. What is the activation energy?**



A 12

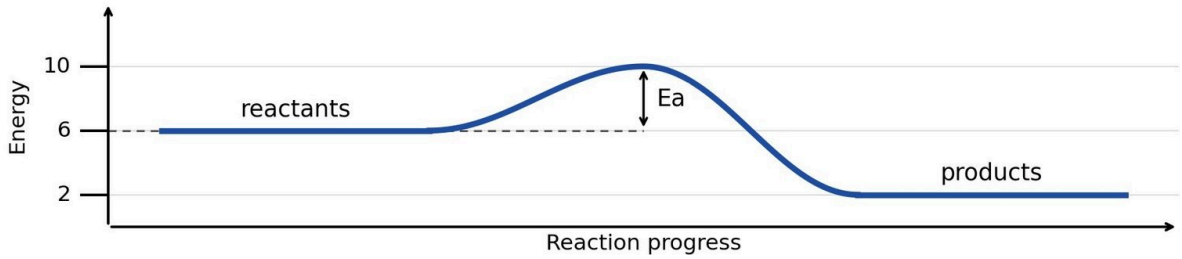
B 4

C 20

D 8

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9 **The diagram shows the energy profile for a reaction. The reactants are at energy 6 and the products are at 2. Is the reaction exothermic or endothermic?**



A exothermic, energy is given out

B exothermic, energy is taken in

C endothermic, energy is taken in

D endothermic, energy is given out

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10 **Why does a hand warmer feel hot?**

A energy is stored in the chemicals

B energy is destroyed by the reaction

C it transfers energy out

D energy is taken in from the surroundings

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11 **In a reaction, the energy needed to break bonds is 1200 kJ and the energy released making bonds is 1600 kJ. What is the overall energy change?**

A -400 kJ

B 1600 kJ

C -1200 kJ

D 400 kJ

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12 **Which of these is endothermic?**

A photosynthesis

B burning a fuel

C neutralisation

D respiration

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13 **In a reaction, the energy needed to break bonds is 1500 kJ and the energy released making bonds is 1100 kJ. Is the reaction exothermic or endothermic?**

A exothermic, more energy is given out

B exothermic, more energy is taken in

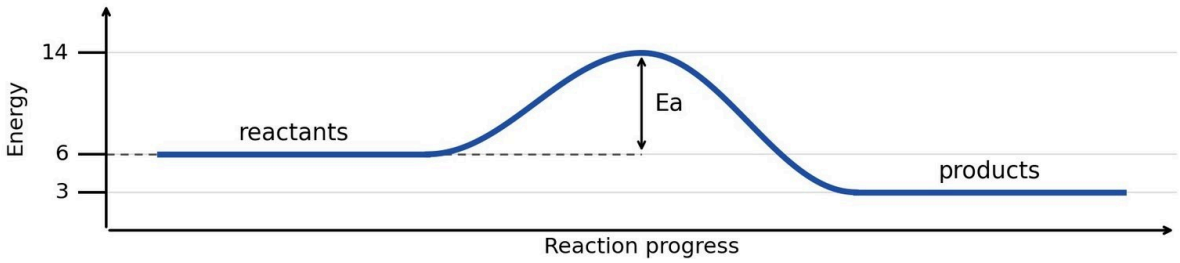
C endothermic, more energy is taken in

D endothermic, more energy is given out

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14

The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 14 and the products are at 3. What is the activation energy?



A 20

B 8

C 11

D 3

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15 **In a reaction, the energy needed to break bonds is 1000 kJ and the energy released making bonds is 1600 kJ. What is the overall energy change?**

A -1000 kJ

B 1600 kJ

C 600 kJ

D -600 kJ

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16 **In a reaction, the energy needed to break bonds is 1000 kJ and the energy released making bonds is 800 kJ. Is the reaction exothermic or endothermic?**

A exothermic, more energy is taken in

B endothermic, more energy is given out

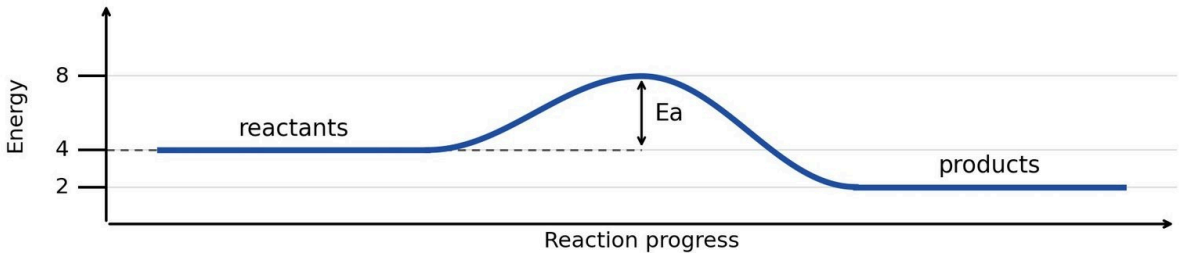
C exothermic, more energy is given out

D endothermic, more energy is taken in

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17

The diagram shows the energy profile for a reaction. The reactants are at energy 4, the peak is at 8 and the products are at 2. What is the activation energy?



A 12

B 2

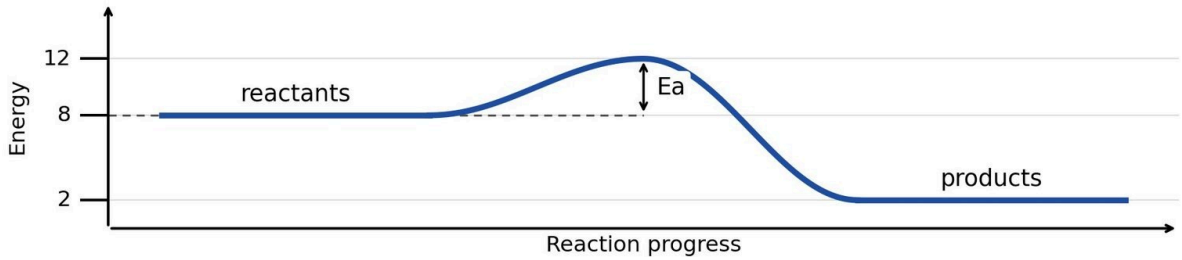
C 4

D 6

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18 **The diagram shows the energy profile for a reaction. The reactants are at energy 8 and the products are at 2. Is the reaction exothermic or endothermic?**



A endothermic, energy is taken in

B exothermic, energy is given out

C exothermic, energy is taken in

D endothermic, energy is given out

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19 **What type of reaction is in a hand warmer?**

A electrolysis

B exothermic

C neutralisation

D endothermic

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20 **In a reaction, the energy needed to break bonds is 800 kJ and the energy released making bonds is 1200 kJ. What is the overall energy change?**

A 400 kJ

B -800 kJ

C 1200 kJ

D -400 kJ

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21 **What happens to the temperature during an exothermic reaction?**

A it falls then rises

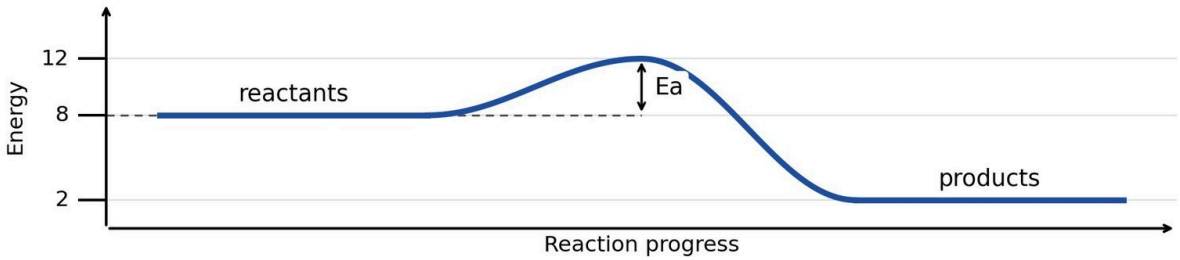
B it rises

C it stays the same

D it falls

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22 **The diagram shows the energy profile for a reaction. The reactants are at energy 8, the peak is at 12 and the products are at 2. What is the activation energy?**



A 10

B 20

C 4

D 6

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23 **In a reaction, the energy needed to break bonds is 800 kJ and the energy released making bonds is 1000 kJ. What is the overall energy change?**

A -800 kJ

B 1000 kJ

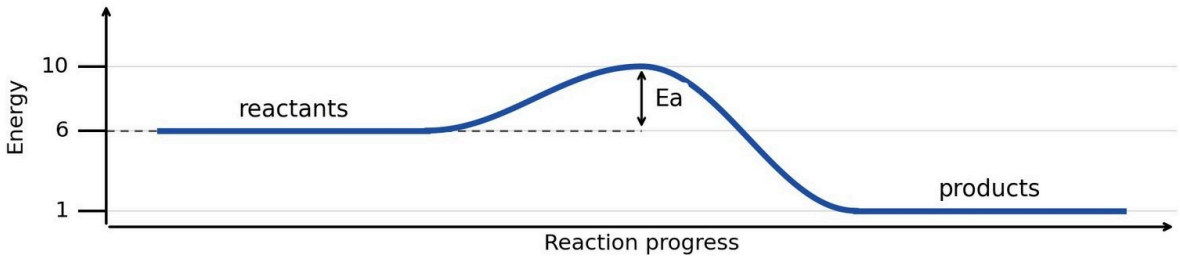
C -200 kJ

D 200 kJ

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24

The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 10 and the products are at 1. What is the activation energy?



A 16

B 9

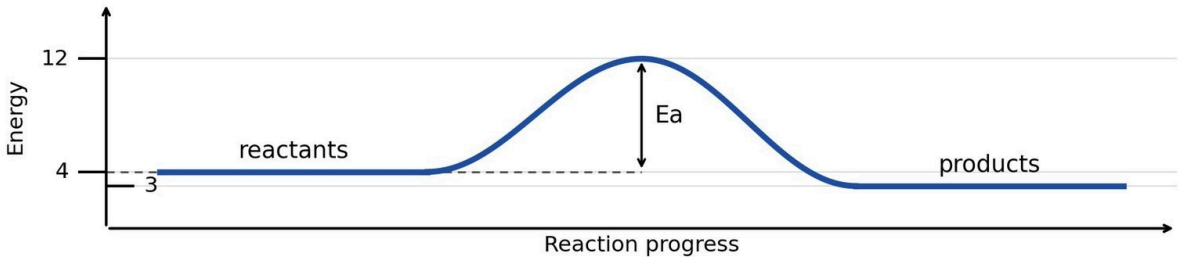
C 4

D 5

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25 **The diagram shows the energy profile for a reaction. The reactants are at energy 4, the peak is at 12 and the products are at 3. What is the activation energy?**



A 9

B 8

C 1

D 16

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ANSWER KEY

1.	B	**10.**	C	**19.**	B
2.	A	**11.**	A	**20.**	D
3.	C	**12.**	A	**21.**	B
4.	D	**13.**	C	**22.**	C
5.	D	**14.**	B	**23.**	C
6.	A	**15.**	D	**24.**	C
7.	A	**16.**	D	**25.**	B
8.	D	**17.**	C		
9.	A	**18.**	B		

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