KINETIC THEORY

1.4.1

Explain each of the following in terms of the kinetic particle theory.

(a) The rate of most reactions increases at higher temperatures.

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..... [3]

(b) A liquid has a fixed volume but takes up the shape of the container. A gas takes up the shape of the container but it does not have a fixed volume.

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..... [3]

[Total: 6]

(a) any **three** from:
particles have more energy (1)
move faster (1)
collide more frequently (1)
more particles have energy greater than E_a [3]
guidance: more colliding molecules have enough energy to react is worth (2)

(b) particles move in all directions / randomly <u>in both</u> liquids and gases (1)

no bonds / very weak forces between particles in gases (1)
molecules can move apart / separate (to fill entire volume) (1)
OR
bonds / forces / IMF between particles in liquids (1)
molecules cannot move apart / separate (so fixed volume in liquids) (1) [3]

[Total: 6]