

8. An investigation was carried out to find out how the breathing rate of a group of desert tortoises varied over a year.

The results are shown in the table.

Month	Average breathing rate (breaths/minute)
January	2.8
February	2.9
March	14.0
April	20.2
May	19.6
June	20.4
July	19.8
August	19.5
September	20.4
October	16.8
November	3.2
December	2.7

- (a) (i) Express, as a simple whole number ratio, the breathing rate in the months of January, March and October.

1

Space for calculation

_____ : _____ : _____
January March October



8. (a) (continued)

- (ii) Use evidence from the table to identify the months when desert tortoises were hibernating.

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- (b) If there is a drought, desert tortoises survive by decreasing their heart rate and breathing rate.

Name this response and explain why it is consequential.

2

Name _____

Explanation _____

- (c) Sugar gliders are small mammals that live in Australia. Their high metabolic rates are reduced each day.

- (i) Give the term used for this type of behaviour.

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- (ii) State the advantage to sugar gliders of reducing their metabolic rate each day.

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[Turn over

