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91192



Level 2 Earth and Space Science, 2016

91192 Demonstrate understanding of stars and planetary systems

2.00 p.m. Thursday 10 November 2016 Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of stars and planetary systems.	Demonstrate in-depth understanding of stars and planetary systems.	Demonstrate comprehensive understanding of stars and planetary systems.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

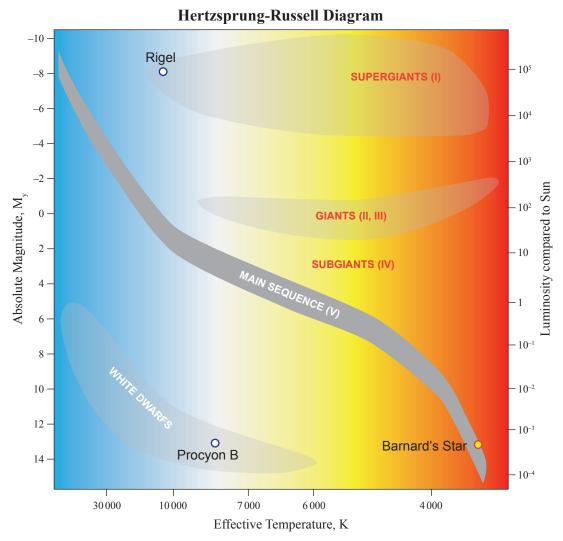
If you need more room for any answer, use the extra space provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–12 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

TOTAL

RESOURCE



Adapted from: http://astronomy.swin.edu.au/cosmos/h/hertzsprung-russell+diagram

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The examination continues on the following page.

QUESTION ONE: HERTZSPRUNG-RUSSELL (HR) DIAGRAM

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Barnard's star and Procyon B are different classes of stars that have a similar luminosity in the night sky.

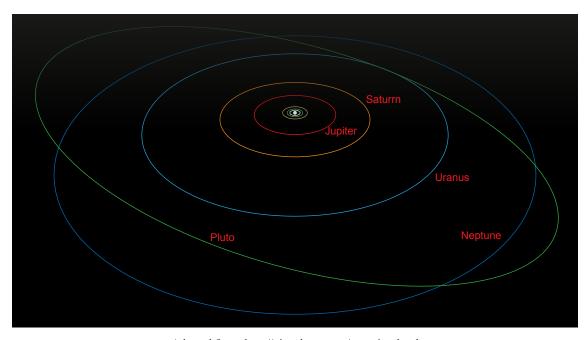
(a) Use the HR diagram on page 2 to describe THREE characteristics of Barnard's star and Procyon B, and then use these characteristics to compare and contrast the luminosity of Barnard's star and Procyon B.

Characteristic		
Barnard's Star		
Procyon B		

QUESTION TWO: FORMATION OF PLUTO

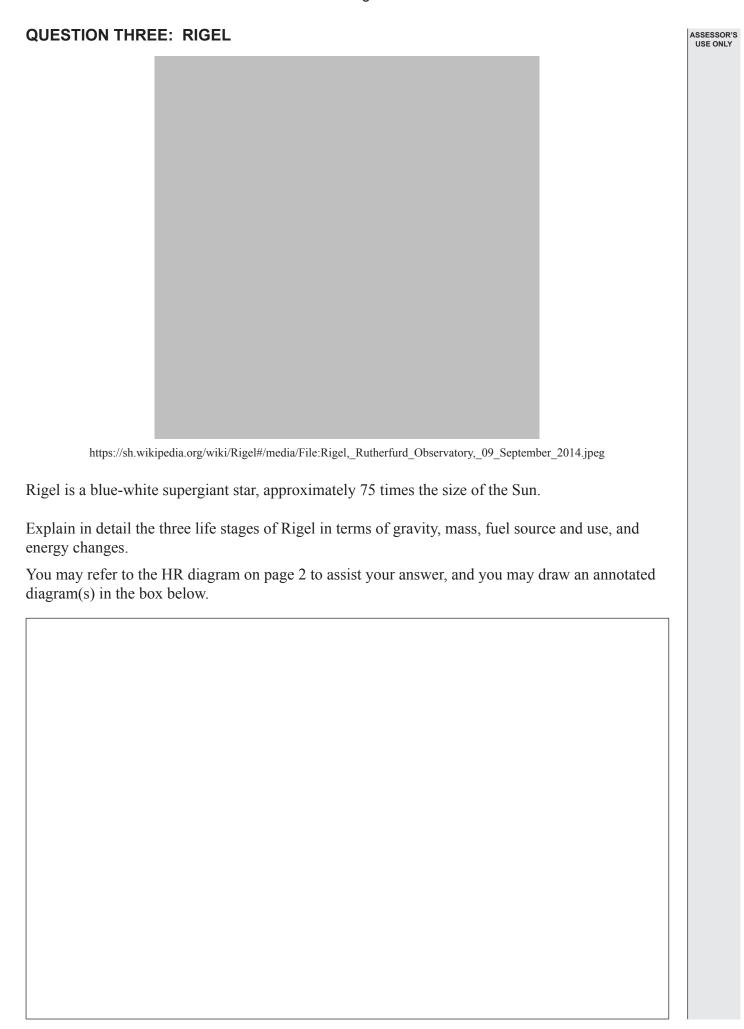
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In 2006 Pluto, previously regarded as the smallest, lowest mass, planet, was reclassified as a dwarf planet, causing a huge amount of media attention.



Adapted from: http://nineplanets.org/overview.html

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