## Answer Form <br> Theoretical Problem No. 3 <br> Why are stars so large?

1) A first, classic estimate of the temperature at the center of the stars.

| 1 a |  | 1.5 |
| :--- | :--- | :--- |
|  |  |  |

2) Finding that the previous temperature estimate is wrong.

| 2 a |  | 0.5 |
| :--- | :--- | :--- |
|  |  |  |


| 2 Zb |  | 0.5 |
| :---: | :---: | :--- |
|  |  |  |


| 2c |  | 0.5 |
| :--- | :--- | :--- |
|  |  |  |


3) A quantum mechanical estimate of the temperature at the center of the stars

| 3 a |  | 1.0 |
| :--- | :--- | :--- |
|  |  |  |


| 3 B |  | 0.5 |
| :---: | :---: | :--- |
|  |  |  |


4) The mass/radius ratio of the stars.

| 4 a |  | 0.5 |
| :--- | :--- | :--- |
|  |  |  |

5) The mass and radius of the smallest star.


| 5 d |  | 0.5 |
| :--- | :--- | :--- |
|  |  |  |


| 5 e |  | 0.5 |
| :--- | :--- | :--- |
|  |  |  |

6) Fusing helium nuclei in older stars.

| 6 a |  | 0.5 |
| :---: | :---: | :---: |
|  |  |  |

