

<b>A Golden Crown?</b>		<b>Rubric</b>	
		Points	Section points
1	<p>Shows correct reasoning and correct calculations such as:  <b>No</b> because either:</p> <p>Mass of crown is 1.8kg, and 1.8kg of pure gold has volume <math>90 \text{ cm}^3</math> not <math>125 \text{ cm}^3</math>  <b>or</b>  Volume of crown is <math>125 \text{ cm}^3</math> and this would have mass of 2.5 kg if it was pure gold.</p> <p><i>Partial credit</i>  2 points for reasoning which is correct but incomplete.</p>	<p>3</p> <p>(2)</p>	<p>3</p>
2.	<p>May solve algebraically  If there is <math>x</math> kg gold and <math>y</math> kg of silver, then:</p> <p><math>x + y = 1.8</math>  <math>50x + 100y = 125</math></p> <p>Solving these two equations, we find <math>y = 0.7</math> ( and <math>x = 1.1</math>)  <b>0.7 kg of silver</b> (and 1.1 kg of gold).</p> <p>Alternatively:</p> <p>Any systematic correct method leading to a correct solution (4 points).  Systematic correct method leading to incorrect solution (3 points).</p> <p>Trial and error method leading to a correct solution (3 points).  Trial and error method leading to incorrect solution (1 points).</p>	<p>1</p> <p>1</p> <p>1</p> <p>4</p> <p>or</p> <p>(7)</p>	<p>7</p>
<b>Total Points</b>			<b>10</b>