

Challenge '09 Solutions

1	1. My annoying brother arrived two days ago.																				
3	2. The time on Stig's clock could be 1.14am, 2.22am or 4.02am. NB As this is a 12-hour clock, times between midnight and 1am are of the format 12.xx, so not three-digit numbers.																				
3	<p>3.</p> <table border="1" data-bbox="568 322 1026 775"> <tr> <td></td> <td>X</td> <td>X</td> <td>→</td> </tr> <tr> <td>↑</td> <td></td> <td></td> <td></td> </tr> <tr> <td>X</td> <td>↓</td> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> <td>X</td> <td></td> </tr> <tr> <td>X</td> <td></td> <td>X</td> <td></td> </tr> </table>		X	X	→	↑				X	↓		X		X	X		X		X	
	X	X	→																		
↑																					
X	↓		X																		
	X	X																			
X		X																			
3 (1 for answer, 2 for suitable explanation)	4. She can maximise her sweetheart's chances by placing all 98 of the rich man's coins into one pot, then one each of her sweetheart's coins into the other two pots.																				
4 (1 for each correct pair of lines, 1 for shading region)	5. Use overlay.																				
6 (1 for each correct jar, up to 6)	<p>6. From left to right:</p> <table border="1" data-bbox="293 1368 1358 1440"> <tr> <td>Poison</td> <td>Beer</td> <td>Honey</td> <td>Poison</td> <td>Poison</td> <td>Beer</td> <td>Honey</td> </tr> </table>	Poison	Beer	Honey	Poison	Poison	Beer	Honey													
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4 (1 for correct box 3 for careful reasoning)	<p>7. She need look at only one item, because she can pick an item from "CD's and DVD's".</p> <p>Then, if it is a CD, that box must contain only CDs, so "CD's" must contain DVDs and "DVD's" must contain both CDs and DVDs.</p> <p>If it is a DVD, then the box must contain only DVDs, so "CD's" must contain CDs and DVDs, and "DVD's" must contain only CDs.</p>																				

