**Additional data sets for Spearman’s Rank practice**

1. **Total alkalinity and dissolved inorganic carbon**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sample date** | **Total alkalinity (umol/kg)** | **Rank** | **Dissolved inorganic carbon (umol/kg)** | **Rank** | ***d*** | ***d2*** |
| 17/03/10 | 2137 |  | 2003 |  |  |  |
| 19/03/10 | 2114 |  | 2000 |  |  |  |
| 21/03/10 | 2134 |  | 2006 |  |  |  |
| 23/03/10 | 2129 |  | 2001 |  |  |  |
| 25/03/10 | 2123 |  | 2001 |  |  |  |
| 27/03/10 | 2117 |  | 2002 |  |  |  |
| 29/03/10 | 2142 |  | 2008 |  |  |  |
| 31/03/10 | 2109 |  | 2002 |  |  |  |
| 02/04/10 | 2115 |  | 2009 |  |  |  |
| 04/04/10 | 2121 |  | 2007 |  |  |  |
| 06/04/10 | 2121 |  | 2013 |  |  |  |
| 08/04/10 | 2128 |  | 2008 |  |  |  |
| 10/04/10 | 2129 |  | 2010 |  |  |  |
| 12/04/10 | 2155 |  | 2010 |  |  |  |
| 14/04/10 | 2142 |  | 2023 |  |  |  |
| 16/04/10 | 2144 |  | 2018 |  |  |  |
| 18/04/10 | 2138 |  | 2029 |  |  |  |
| 20/04/10 | 2134 |  | 2025 |  |  |  |
| 22/04/10 | 2143 |  | 2024 |  |  |  |
| 24/04/10 | 2140 |  | 2025 |  |  |  |

|  |  |
| --- | --- |
| Σ*d2* |  |

$$r=1- \frac{6\sum\_{}^{}d^{2}}{n^{3}-n}$$

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1. **Temperature and salinity**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sample date** | **Temperature (°C)** | **Rank** | **Salinity (parts per thousand ‰)** | **Rank** | ***d*** | ***d2*** |
| 17/03/10 | -1.644 |  | 29.94 |  |  |  |
| 19/03/10 | -1.644 |  | 29.94 |  |  |  |
| 21/03/10 | -1.644 |  | 30.04 |  |  |  |
| 23/03/10 | -1.643 |  | 30.23 |  |  |  |
| 25/03/10 | -1.641 |  | 30.46 |  |  |  |
| 27/03/10 | -1.640 |  | 29.98 |  |  |  |
| 29/03/10 | -1.641 |  | 29.99 |  |  |  |
| 31/03/10 | -1.642 |  | 29.97 |  |  |  |
| 02/04/10 | -1.647 |  | 30.11 |  |  |  |
| 04/04/10 | -1.646 |  | 30.08 |  |  |  |
| 06/04/10 | -1.649 |  | 30.30 |  |  |  |
| 08/04/10 | -1.649 |  | 30.12 |  |  |  |
| 10/04/10 | -1.645 |  | 30.16 |  |  |  |
| 12/04/10 | -1.651 |  | 30.16 |  |  |  |
| 14/04/10 | -1.652 |  | 30.23 |  |  |  |
| 16/04/10 | -1.652 |  | 30.19 |  |  |  |
| 18/04/10 | -1.652 |  | 30.26 |  |  |  |
| 20/04/10 | -1.654 |  | 30.26 |  |  |  |
| 22/04/10 | -1.650 |  | 30.34 |  |  |  |
| 24/04/10 | -1.654 |  | 30.28 |  |  |  |

|  |  |
| --- | --- |
| Σ*d2* |  |

$$r=1- \frac{6\sum\_{}^{}d^{2}}{n^{3}-n}$$