Lower 6

Graphical analysis and interpretation

Period, T/s and mass, m/kg are related by the equation

T2 = qm + k

Where q and m are constants with units.

1. Copy and complete the table given.
2. From this table draw the appropriate graph with the best straight line.
3. From the graph calculate the values of q and k with the appropriate units.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **m/g** | **m/kg** | **n** | **t/s** | **T/s** | **T2/s2** |
| 325 |  | 25 | 33.18 |  |  |
| 425 |  | 25 | 35.13 |  |  |
| 475 |  | 24 | 34.70 |  |  |
| 525 |  | 23 | 34.50 |  |  |
| 600 |  | 23 | 35.63 |  |  |
| 650 |  | 22 | 34.79 |  |  |
| 675 |  | 22 | 35.46 |  |  |