***Задание 17***

***Задача: Да се кубира по средно пробно стъбло едно насаждение, от чието измерване са получени следните данни:***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| D1/3 | 10 | 14 | 18 | 22 | 26 | 30 | 34 | 38 | 42 | 46 | 50 | 54 | 58 | 62 | 66 | 70 | 74 |
| N бр. | – | – | 10 | 12 | 14 | 22 | 26 | 38 | 30 | 22 | 20 | 14 | 8 | 2 | – | – | – |
| изм.ср.височ. | – | – | 18 | 20 | 22 | 26 | 28 | 29 | 30 | 31 | 32 | 34 | 34 | 32 | – | – | – |

***Данните за средното моделно стъбло са: d1,3 = 40 см; H = 29.9 м, а диаметрите на двуметровите секции са съответно:***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| H | 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 | 27 | 29 | 29.9 | 31 |
| d | 40 | 39 | 37 | 36 | 34 | 33 | 31 | 29 | 27 | 25 | 22 | 19 | 15 | 9 | 3 | 0 |  |

***Решение:***

|  |  |  |  |
| --- | --- | --- | --- |
| D 1.3 | N бр. | gi | G |
| 10 |   | 0.0079 | 0.0000 |
| 14 |   | 0.0154 | 0.0000 |
| 18 | 10 | 0.0254 | 0.2543 |
| 22 | 12 | 0.0380 | 0.4559 |
| 26 | 14 | 0.0531 | 0.7429 |
| 30 | 22 | 0.0707 | 1.5543 |
| 34 | 26 | 0.0907 | 2.3594 |
| 38 | 38 | 0.1134 | 4.3075 |
| 42 | 30 | 0.1385 | 4.1542 |
| 46 | 22 | 0.1661 | 3.6543 |
| 50 | 20 | 0.1963 | 3.9250 |
| 54 | 14 | 0.2289 | 3.2047 |
| 58 | 8 | 0.2641 | 2.1126 |
| 62 | 2 | 0.3018 | 0.6035 |
| 66 |   | 0.3419 | 0.0000 |
| 70 |   | 0.3847 | 0.0000 |
| 74 |   | 0.4299 | 0.0000 |
|   | 218 | 2.8665 | 27.3287 |

g ср = 0.1253m² V vr=0.001791

d ср = 39,9cm L vr =1.9

dvr.=0.000157

V’=1940647m3

V hub=1.9388m

V cm=V’\*G/dsr=423.0611