|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| m | **30** | kg |  |  |
| v1 | **0** | m /s | NO | J (Ec1) |
| v2 | **3** | m /s | 135,0000 | J (Ec2) |
| t | **7** | s | 0,4286 | m/s2 (a) |
|  | **0,25** |  | 771,7500 | J (T/ f) |
| **y** | **0** | 100 | 10,5000 | m (d) |
| **x** | **100** |  | 0,0000 | m (h) |
|  |  |  | 0,0000 | J (Eg1) |
|  |  |  | 0,0000 | J (Eg2) |
|  |  |  **T** | **906,7500** | **J** |

***Respuesta.***

***Solución:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| m | **1500** | kg | 14700 | N (w) |
| v1 | **80** | km/h | 370370,3704 | J (Ec) |
| v2 | **0** | km/h | 0,0000 | J (EC) |
| d | **100** | m | 14,83404529 | m (h) |
|  |  |  | -2,4691 | m/s2 (a) |
| tg  | **0,15** | 0,1489 | 218060,4658 | J (Epg) |
|  |  |  T =EC2 -EPG1 - EC1 |  |
|  |  |  **T** | **-588430,8362** | **J** |
|  |  |  t = 2d / (v2 + v1 ) |  |
|  |  | t | 9 | s |
|   |   | **P** | **-87,6424** | **HP** |

***Respuesta.***

|  |  |  |
| --- | --- | --- |
| **** HIELO = | **0,92**  | gr /cm3 |
| **** AGUA = | **1,00**  | gr /cm3 |
| **L*f***HIELO = | **80,00**  | cal /gr |
| **L*v***AGUA = | **540,00**  | cal /gr |
| **c** HIELO = | **0,50**  | cal /gr-ºC |
| **c** AGUA = | **1,00**  | cal /gr-ºC |
| **c** VAPOR = | **0,48**  | cal /gr-ºC |

***Solución:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| t 1 | **260,0**  | ºR | -13,0  | ºC |
| t f | **273,0**  | ºK | 0,0  | ºC |
| t 2 | **308,0**  | ºK | 35,0  | ºC |
| m | **2,50**  | kg | 2.500,0  | gr |
| Q = (cHIELO\*(Tf -T1)+L*f* HIELO +cAGUA\*(t2-Tf))\*m |
|  |  | ** Q** | **303.750,0**  | **cal** |

***Respuesta.***

|  |  |  |
| --- | --- | --- |
| ****AGUA = | **1000**  | kg /m3 |

***Solución:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| D1 | **4** | pulg. | 0,10  | m |
| v1 | **6** | pie/s | 1,83  | m/s |
| D2 | **7** | pulg. | 0,18  | m |
|  |  v2 =V1\*D1^2/D2^2 |  |
|  |  |  **v2** | **0,5972** | **m/s** |
| y1 | **46** | cm | 0,46  | m |
|  | Y2 =100\*(9,8\*y1+v1^2/2-v2^2/2)/9,8 |
|  |  | **h** | **61,2444**  | **cm** |

***Respuesta.***