1. CHUTE LIBRE SANS VITESSE INITIALE :

Description de la manipulation :

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| **h( )** | **tm ( )** | **t2m ( )** | **Δtm ( )** | **h/tm ( )** |
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|  |  |  |  |  |

**tm=** ; **Δtm=**

1. Tracer de la courbe **h=f(t2m)**

Prendre l’échelle : axe des ordonnées : **1cm 0.025m** ; axe des abscisses : **1cm 0.007s2**

Commentaires sur la courbe:

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1. Déduction graphique de l’accélération de la pesanteur **ggr**

Prendre pour le calcul de la pente les deux points sue la courbe tel que : h1=5cm et h2=40 cm. Indiquer ces points sur la courbe par des croix.

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Pente : **a=**……………………………………………………………………………………………………………

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1. Type de mouvement dans la chute libre en justifiant votre réponse

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1. Proportionnalité de la vitesse de la bille par rapport à la hauteur de la chute h en justifiant votre réponse:

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1. **CHUTE LIBRE AVEC VITESSE INITIALE:**

Description de la manipulation:

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| **h( )** | **tm ( )** | **h/tm ( )** | **Δtm ( )** | **Δ[h/tm]( )** |
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**tm= ; Δtm=**

**Δ[h/tm]= ; Δh=**

1. Calcul de la vitesse pour une hauteur de chute de h0=……..cm.

Prendre pour ce calcul l’accélération de la pesanteur trouvée graphiquement dans la partie A.

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2- Trace de la courbe **h/tm =F(tm)**

Prendre l’échelle : axe des ordonnées : **1cm 0.20m** **/s**; axe des abscisses : **1cm 0.008s**

Commentaires sur la courbe:

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1. Déduction graphique de la vitesse **V0**du mouvement

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1. Comparaison des vitesses **V** et **V0** puis justification des écarts éventuels

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**CONCLUSION:**

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