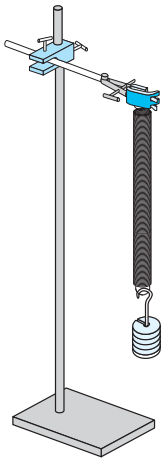
School				Mark (10)
Name		HKID		
Class (No.)		Date		

A3 Timing Oscillations

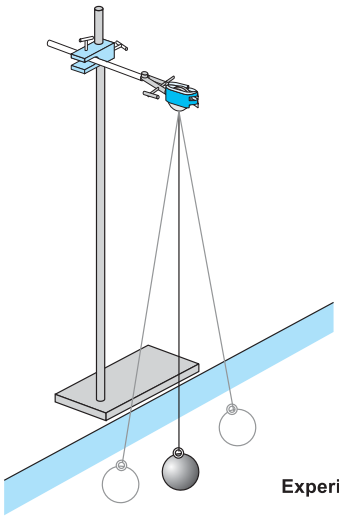
Answers to Preview Questions

1. _____
2. _____
3. _____
4. _____

Experiment 1 Determining the force constant of a spring through a mass-spring system



Experiment 1



Experiment 2

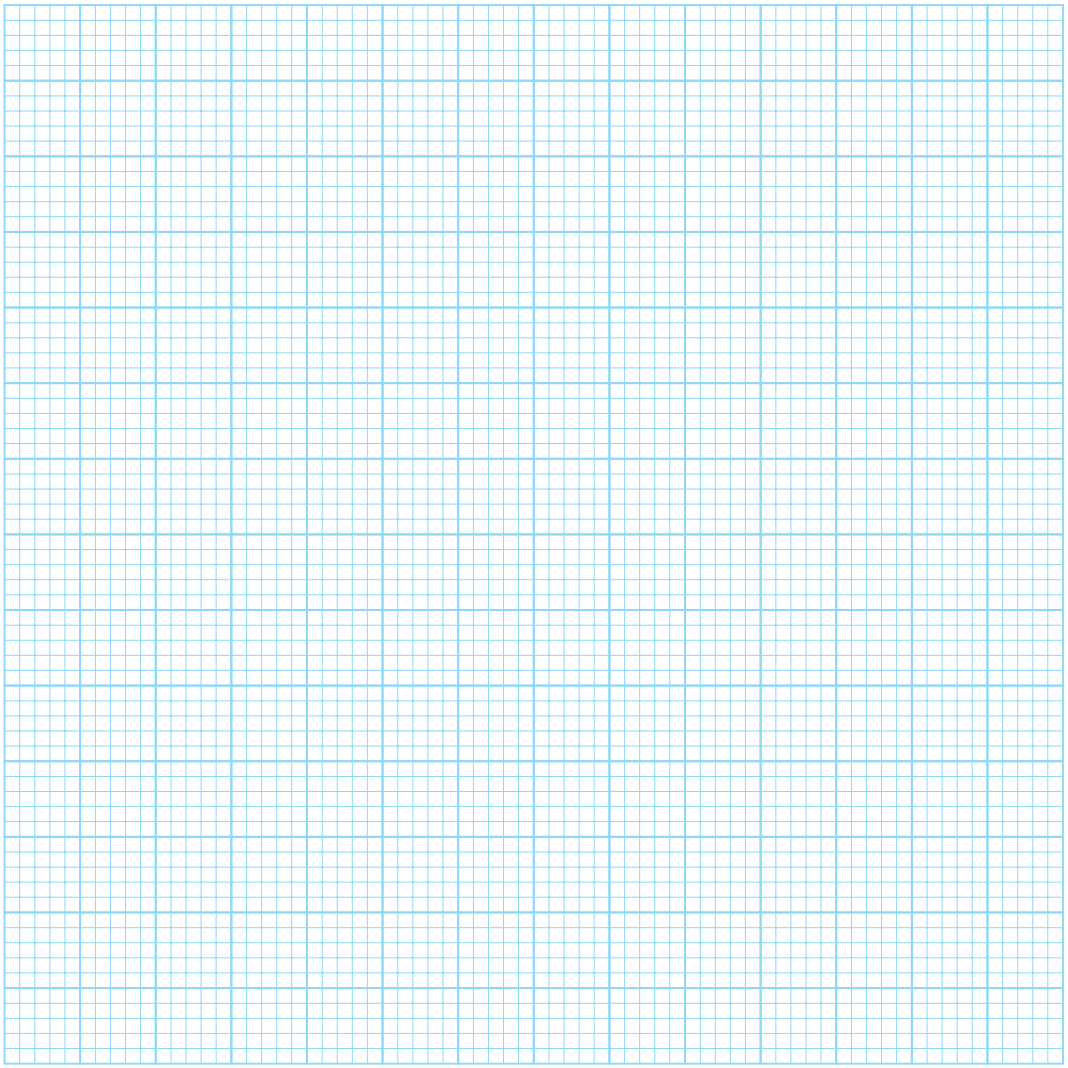
Experiment 1 Step 2

step size of load _____

Table 1

Load, m ( )										
T_1 ( )										
T_2 ( )										
mean T										
T^2										

Teacher's Remark



Plot of T^2 against m

Data Analysis 1

2. Mean of T^2 _____ mean of m _____

   Coordinate of the centroid _____

4. Slope of the graph, m' _____

   Force constant of the spring, k _____

6. m^+ _____ $|m^+ - m'|$ _____

   m^- _____ $|m' - m^-|$ _____

   $\Delta m'$ _____

7. Percent error in slope _____

   Percent error in k _____

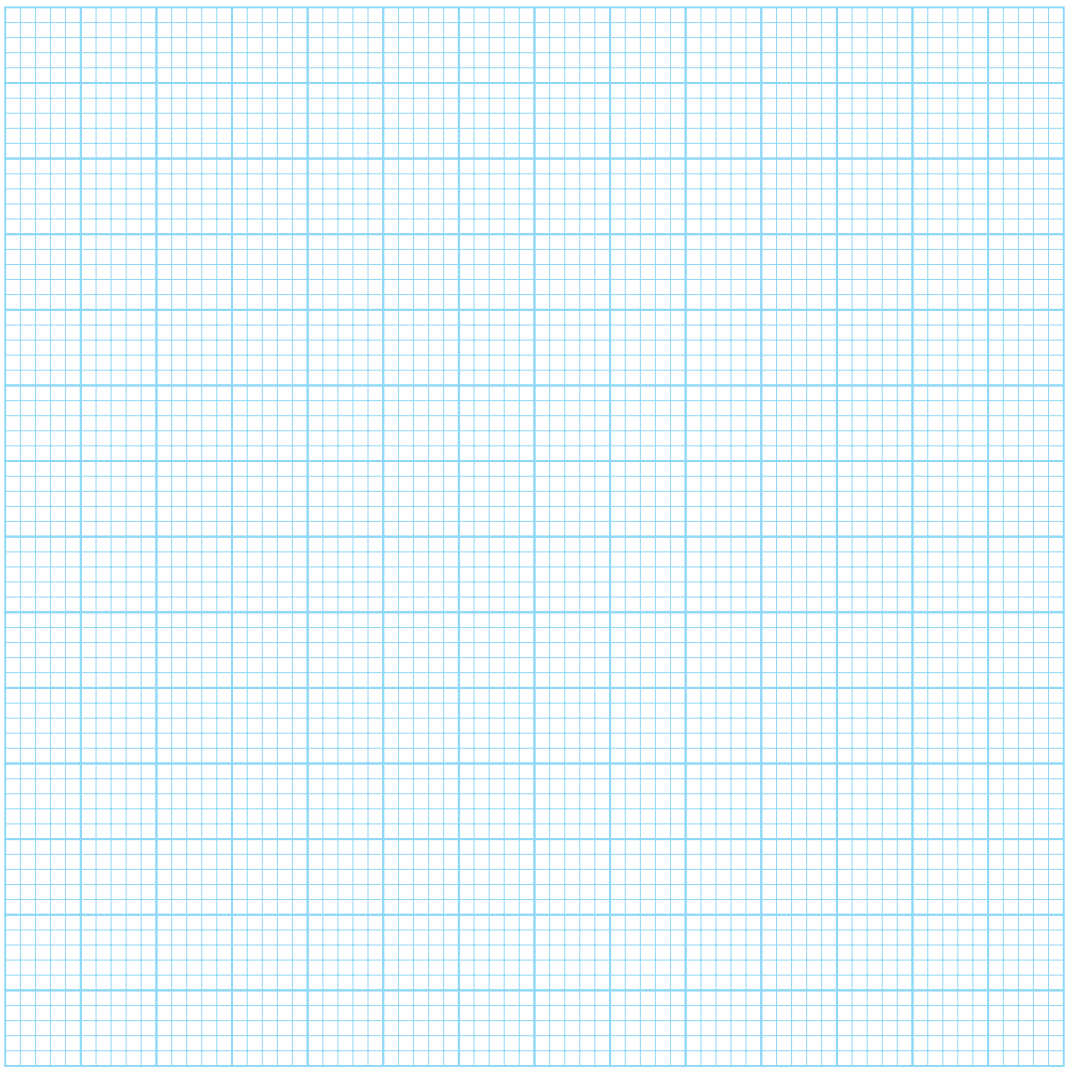
8. Force constant of the spring, k _____

Teacher's Remark

Experiment 2 Determining the acceleration due to gravity indirectly by timing a simple pendulum

Table 2

Length, l ( )										
T_1 ( )										
T_2 ( )										
mean T										
T^2										



Plot of T^2 against l

Teacher's Remark

Data Analysis 2

2. Mean of T^2 _____ mean of l _____

   Coordinate of the centroid _____

4. Slope of the graph, m _____

   Acceleration due to gravity, g _____

6. m^+ _____ $|m^+ - m|$ _____

   m _____ $|m - m^-|$ _____

   Δm _____

7. Percent error in slope _____

   Percent error in g _____

8. Acceleration due to gravity, g _____

Answers to Discussion

1. _____

   _____

   _____

   _____

   _____

2. _____

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3. _____

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4. _____

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   _____

5. _____

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