

UM-SJTU JOINT INSTITUTE  
PHYSICS LABORATORY  
DATA SHEET (EXERCISE 3)

Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

Group: \_\_\_\_\_

Date: \_\_\_\_\_

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**NOTICE.** Please remember to show the data sheet to your instructor before leaving the laboratory. The data sheet will not be accepted if the data are recorded with a pencil or modified with a correction fluid/tape. If a mistake is made in recording a datum item, cancel the wrong value by drawing a fine line through it, record the correct value legibly, and ask your instructor to confirm the correction. Please remember to take a record of the precision of the instruments used. You are required to hand in the original data with your lab report, so please keep the data sheet properly.

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spring 1 [ ] $\pm$ [ ]		spring 2 [ ] $\pm$ [ ]		series [ ] $\pm$ [ ]	
$L_0$		$L_0$		$L_0$	
$L_1$		$L_1$		$L_1$	
$L_2$		$L_2$		$L_2$	
$L_3$		$L_3$		$L_3$	
$L_4$		$L_4$		$L_4$	
$L_5$		$L_5$		$L_5$	
$L_6$		$L_6$		$L_6$	

Table 1. Spring constant measurement data.

Instructor's signature: \_\_\_\_\_

ten periods $\boxed{\phantom{00}} \pm \text{---} \boxed{\phantom{00}}$					
horizontal		incline 1		incline 2	
$m_1$		$m_1$		$m_1$	
$m_2$		$m_2$		$m_2$	
$m_3$		$m_3$		$m_3$	
$m_4$		$m_4$		$m_4$	
$m_5$		$m_5$		$m_5$	
$m_6$		$m_6$		$m_6$	

Table 2. Measurement data for the  $T$  vs.  $M$  relation.

$A \boxed{\phantom{00}} \pm \text{---} \boxed{\phantom{00}}$	ten periods $\boxed{\phantom{00}} \pm \text{---} \boxed{\phantom{00}}$	
1		
2		
3		
4		
5		
6		

Table 3. Data for the  $T$  vs.  $A$  relation.

$A \boxed{\phantom{00}} \pm \text{---} \boxed{\phantom{00}}$	$\Delta t \boxed{\phantom{00}} \pm \text{---} \boxed{\phantom{00}}$	
1		
2		
3		
4		
5		
6		
$x_{\text{in}} \boxed{\phantom{00}} \pm \text{---} \boxed{\phantom{00}}$	$x_{\text{out}} \boxed{\phantom{00}} \pm \text{---} \boxed{\phantom{00}}$	

Table 4. Data for the  $v_{\text{max}}^2$  vs.  $A^2$  relation.

Instructor's signature: \_\_\_\_\_

$m$ [ ] $\pm$ [ ] [ ]	
1	
2	
3	
4	
5	
6	

Table 5. Weight measurement data.

object with I-shape $m_{\text{obj}}$ [ ] $\pm$ [ ] [ ]	
object with U-shape $m_{\text{obj}}$ [ ] $\pm$ [ ] [ ]	
mass of springs 1 & 2 $m_{\text{spr1\&2}}$ [ ] $\pm$ [ ] [ ]	
equivalent mass $M_0 = m_{\text{obj}} + \frac{1}{3}m_{\text{spr1\&2}}$ [ ]	
I-shape	
U-shape	

Table 6. Mass measurement data.

Instructor's signature: \_\_\_\_\_