

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

PHYSICAL SETTING
PHYSICS

Tear Here

ANSWER SHEET

Student Projectiles Key Sex: Male Female Grade

Teacher School

Record your answers to Part A and Part B-1 on this answer sheet.

Part A

- 1 2
- 2 3
- 3 4
- 4 1
- 5 4
- 6 3
- 7 3
- 8 2
- 9 4

Part A Score

Part B-1

- 10 1
- 11 2
- 12 2
- 13 4

Part B-1 Score

Write your answers to Part B-2 and Part C in your answer booklet.

The declaration below should be signed when you have completed the examination.

I do hereby affirm, at the close of this examination, that I had no unlawful knowledge of the questions or answers prior to the examination and that I have neither given nor received assistance in answering any of the questions during the examination.

Signature

Tear Here

**PHYSICAL SETTING
 PHYSICS**

ANSWER BOOKLET

Student Sex: Male
 Female
 Teacher
 School Grade

Part	Maximum Score	Student's Score
A	9	
B-1	4	
B-2	3	
C	11	
Total Written Test Score (Maximum Raw Score: 27)		<input type="text"/>
Final Score (From Conversion Chart)		<input type="text"/>

Answer all questions in Part B-2 and Part C. Record your answers in this booklet.

Raters' Initials:
 Rater 1 Rater 2

Part B-2

14

15-16
 $\theta = 30^\circ$
 $v_{ix} = 13 \text{ m/s}$
 $v_{iy} = 7.5 \text{ m/s}$
 $v_{fyup} = 0 \text{ m/s}$
 $g = -9.81 \frac{\text{m}}{\text{s}^2}$

$\frac{u}{t} = t_{up} \cdot 2$ $v_{fyup} = v_{iy} + a t_{up}$

$t_{up} = \frac{v_{fyup} - v_{iy}}{a}$

$t_{up} = \frac{0 \text{ m/s} - 7.5 \text{ m/s}}{-9.81 \frac{\text{m}}{\text{s}^2}}$

$t_{up} = .765 \text{ s}$ $t = 1.53 \text{ s}$

For Raters Only

14

15

16

For Raters Only

17 16 m/s

Part C
 $v_x = \frac{dx}{t} = \frac{8m}{.5s}$

18 4.91 m/s

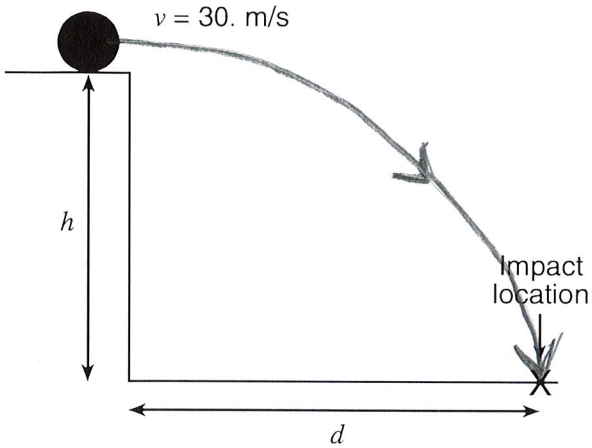
$v_{iy} = v_{iy} + at = (9.81 \frac{m}{s^2})(.5s)$

19-20 G $\frac{u}{dy}$
 $v_{fy} = -4.91 \frac{m}{s}$
 $t = .5s$
 $g = -9.81 \frac{m}{s^2}$

$dy = v_{iy}t + \frac{1}{2}at^2$
 $dy = (-4.91 \frac{m}{s})(.5s) + \frac{1}{2}(-9.81 \frac{m}{s^2})(.5s)^2$

$dy = -3.68m$ magnitude = 3.68m

21



22-23

G $\frac{u}{dx}$
 $v_x = 30 \frac{m}{s}$
 $t = 2.5s$

$v_x = \frac{dx}{t}$

$d_x = v_x \cdot t$

$d_x = (30 \frac{m}{s})(2.5s)$

$d_x = 75m$

17

18

19

20

21

22

23

24-25

$$d = v_i t + \frac{1}{2} a t^2$$

$$\begin{aligned} G \\ d=h \\ a=g \end{aligned}$$

$$h = \frac{1}{2} g t^2$$

$$t = \sqrt{\frac{h}{\frac{1}{2}g}}$$

24

25

26

26-27

Air time will increase & horizontal
distance will decrease.

27