Name: Date: Period:

Chapter 3 (Two-Dimensional Kinematics)

Homework Check A (collected Fri, Sept 9)

Graphical Vector Addition p. 68 #1, 2 ..... Complete by Tue, Sept 6

Draw the pictures only; you do not need to do any calculations.

Stamp Here 2 Points

Vector Addition Calculations pp. 68-69 #3, 6, 8, 9, 11, 12a, 13a ..... Complete by Tue, Sept 6

Must include vector diagrams showing the graphical addition and the calculations

Stamp Here 8 Points

Projectile Motion Intro pp. 69-70 #17, 20, 22 ..... Complete by Thu, Aug 11

Must include pictures with axes indicated ***Homework Quiz***

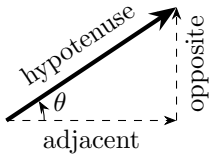
Stamp Here 5 Points

Answers

3. 11.7 units @ 33.1° S of E
6. $v_{1x} = -6.6$; $v_{1y} = 0$; $v_{2x} = 4.88$; $v_{2y} = 6.96$; 7.17 units @ 76.1° N of W
8. 625.4 km/h northerly; 553.3 km/h westerly; 1094 km North; 968 km West
9. $R_x = 24.0$; $R_y = 11.7$; $\vec{R} = 26.7$ units @ 26° N of E
11. 64.6 units @ 53.1° N of E
12. (a) 137.2 @ 73.0° W of S
13. (a) 62.6 @ 58.9° E of S
17. 3.71 m
20. 7.7 m/s

Homework will be accepted for full credit until the test. Homework turned in after the test will be accepted for half credit until the Unit 3 Test. *Please remember that you will not be eligible to complete test corrections if you do not turn in your homework.*

Equations



$$\sin\theta = \frac{\text{opp}}{\text{hyp}} \qquad \cos\theta = \frac{\text{adj}}{\text{hyp}} \qquad \tan\theta = \frac{\text{opp}}{\text{adj}}$$

$$R = \frac{v_0^2 \sin(2\theta)}{g}$$

$v_f = v_i + at$	$d = v_i t + \frac{1}{2}at^2$	$v_f^2 = v_i^2 + 2ad$
"Old Faithful"	*"The Big Chalupa"*	*"Ain't Got No Time"*

Name: Date: Period:

Chapter 3 (Two-Dimensional Kinematics)

Homework Check B (collected on Test Day)

Projectile Motion (Involved) pp. 69-70, 72 #23, 26, 27, 28, 29, 55, 56, 67 . Complete by Tue, Sept 13
Must include pictures with axes indicated

Stamp Here 10 Points

Relative Velocity pp. 70-71 #38, 39, 41 ..... Complete by Mon, Sept 19

Stamp Here 5 Points

Conceptual Questions p. 67 #1, 2, 4, 6, 7, 8, 9, 12, 13 ,15 17, 19 ..... Complete by Mon, Sept 19
These questions should have at least one full sentence of explanation

Stamp Here 5 Points

Misconceptual Questions pp. 67-68 #1, 2, 4, 5, 6, 8, 9, 11, 12 ..... Complete by Mon, Sept 19.
You do not need to get this one stamped, but these are good review for your test!

Bonus Problems! p. 69 #19; p. 70 #37; p. 71 #44 & 45 ..... Turn in separately on test day!

Test will be on Tuesday, Sept 20.

Problem Answers

23. 17.7° & 72.3°
26. 12.5 s; 50 m
27. (a) 30.9 m; (b) 5.02 s; (c) 136.1 m; (d) 28.9 m/s
28. 9.72 m/s; 8.60 m
29. 22.3 m
55. 0.88 s; 0.95 m
56. 6.65 m/s
67. 53.7°
38. 10.5 m/s; 6.5 ms
39. 1.66 m/s @ 65.0° E of N
41. 23.1 sec

Misconceptual Answers

1. c 2. a 4. a 5. b 6. b 8. d 9. c 11. b&e 12. a

Extra Practice

These problems are not required and are not for bonus. Work and answers are available on Schoology.

Vector Addition ..... #4, 10, 12bc, 13bc
Projectile Motion ..... #18, 21, 31
Relative Velocity ..... #46