# Chapter 3 (Two-Dimensional Kinematics)

## Homework Check A (collected Fri, Sept 9)

**Graphical Vector Addition**     p. 68 #1, 2 .................................... Complete by Fri, 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 Tu-We, Sept 10-11
    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 Tue-Wed, Aug 17-18
    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
22. 1.89 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.*

# 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 Fri, Sept 20
  MUST INCLUDE PICTURES WITH AXES INDICATED

> STAMP
> HERE
> 10 POINTS

**Relative Velocity**   pp. 70-71 #38, 39, 41 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Complete by Mon, Sept 23

> STAMP
> HERE
> 5 POINTS

**Conceptual Questions**   p. 67 #1, 2, 4, 6, 7, 8, 9, 12, 13 ,15 17, 19 . . . . .Complete by Tu-We, Sept 24-25
  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 Tu-We, Sept 24-25.
  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 Thursday, Sept 26.**

## Problem Answers

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