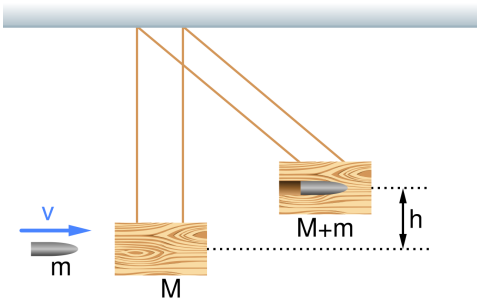
Name: Date: Period:

Chapter 7 (Momentum)



"Sketch of a ballistic pendulum before and after it is struck by a bullet" by MikeRun

Homework Check A (collected Thu, Jan 15)

Momentum and its Conservation p. 192 #1, 2, 3, 5, 6, 7, 9, 11 ..... Complete by Mon, Jan 13

STAMP HERE 5 POINTS

Collisions and Impulse p. 192 #15, 16, 18 ..... Complete by Mon, Jan 13

STAMP HERE 5 POINTS

Elastic Collisions pp. 193 #25, 26, 27, 30, 71 ..... Complete by Thu, Jan 15

Homework Quiz

STAMP HERE 5 POINTS

Answers

1. 0.235 kg m/s
2. 5.8 m/s
3. 10.2 m/s
5. 5.85×10^7 N
6. 13,860 kg
7. 0.90 m/s
9. 2,500 m/s
11. 0.99 m/s
15. 2233 N
16. (a) 1.71 N s; (b) 489 N
18. 2.38 N s to the left
25. 1.27 m/s; 5.07 ms
26. −1.93 m/s; 3.87 m/s
27. 2.5 m/s; 5.0 m/s
30. 2.64 m
71. 3.65 m/s; 4.45 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 next test. *Please remember that you will not be eligible to complete test corrections if you do not turn in your homework.*

Equations

$$p \equiv mv \qquad J \equiv F\Delta t \qquad \Sigma F = \frac{\Delta p}{\Delta t} \qquad \Sigma p = \Sigma p' \qquad v_A + v'_A = v_B + v'_B \qquad x_{CM} = \frac{\Sigma m_i x_i}{\Sigma m_i}$$

Name: Date: Period:

Chapter 7 (Momentum)

Homework Check B (collected on Test Day)

Momentum in Two Dimensions p. 194 #44 ..... Complete by Fri, Jan 17

Stamp Here 2 Points

Center of Mass p. 194 #49, 50, 51 ..... Complete by Tue, Jan 21

Stamp Here 3 Points

Conceptual Questions pp. 190 #1, 3, 4, 6, 9, 11, 13, 14, 16, 21, 24 ..... Complete by Tue, Jan 21

These questions should have at least one full sentence of explanation

Stamp Here 5 Points

Misconceptual Questions p. 191 #1, 2, 4, 5, 6, 7, 11, 12 ..... Complete by Tue, Jan 21

You do not need to get this one stamped, but these are good review for your test!

Bonus Problems! p. 192 #14; p. 194 #45; p. 194 #55 ..... Turn in separately on test day!

Test will be on Thu, Jan 23.

Problem Answers

44. 1.23 m/s at 46.9° S of E
49. 6.46×10^{-11} m
50. 0.44 m
51. 2.61 m from front of car

Misconceptual Answers

1. D	4. A	6. A	11. B
2. B	5. A	7. A	12. C

Equations

$$p \equiv mv \qquad J \equiv F\Delta t \qquad \Sigma F = \frac{\Delta p}{\Delta t} \qquad \Sigma p = \Sigma p' \qquad v_A + v'_A = v_B + v'_B \qquad x_{CM} = \frac{\Sigma m_i x_i}{\Sigma m_i}$$