

PHYS2425 Spring, 2024
Homework Assignments, 5th Edition

- (1) Turn in assignments at the beginning of the period on the indicated date. Assignments must be stapled.
- (2) Answer Questions with **complete sentences**.
- (3) **Show your work** on all Problems. **Highlight answers**.
- (4) Skip a line between each Question or Problem.
- (5) If you want a copy, make a photocopy before turning in - these assignments will not be returned to you. Turn in original - not photocopy.
- (6) **Papers must be professional in appearance - otherwise, they will not be graded.**

Chapter	Questions	Misconception Questions	Problems	Complete By:
2	1, 5, 12, 14, 15	1, 7	5, 16, 26, 35 36, 38, 52, 56, 58, 63	1/29
3	10, 16, 17 19	4, 6, 9, 10 11, 13	1, 2, 8, 9 10, 32, 34 36, 47	2/12
4	1, 3, 7, 16	2, 4, 7, 13	2, 3 5, 8 17, 42, 43 45	2/14
5	11, 15	3, 7, 9, 10	1, 2, 4, 16 20, 35, 39 80, 85	2/26
6	3, 10	2, 3, 6	1, 4, 5, 31, 32	2/28
7	11	2, 5, 7	1, 3, 18, 24 29, 37, 39 56, 62, 74	3/4
8	6	2, 7, 8, 9	1, 12, 14, 18 28, 30, 55 56, 57, 58 64, 65	3/6
9	11, 15	1, 2, 4, 6 10, 12	2, 3, 6, 18 19, 29, 47 55, 56, 57 79	3/27
10	11, 16	2, 4, 5, 6 7, 8, 13	1, 5, 9, 12 21, 30, 33 37, 45, 81	4/1
11	2, 3, 5	3, 6, 9	2, 5, 6, 26, 68	4/3

12	4, 5, 7 17	1, 2, 5, 6,	1, 3, 4, 5 11, 12 (assume top is not attached), 14 37, 40, 50 68	4/15
13	6, 8, 16 19, 22	1, 2, 5, 6 12, 13, 14	3, 7, 10, 11 15, 16, 26 27, 28 (work part b first, then part a), 44 55, 79	4/22
14	No homework			
17	2, 7, 9, 13	3, 4, 5	9, 10, 15, 19 67	4/29

Answers to Even-Numbered Problems 5th Edition

2	(16) 0.25 m/s 1.3 m/s 0.4 m/s 1.56 m/s -1 m/s (26) 14.6 m/s ² (36) 3.13 s (38) 14.6 m/s ² (52) 51.8 m (56) 24.7 m 2.24 s (58) 7.85 m/s 0.495 s -176.4 m/s ²
3	(2) 16.8m at 342.6° (8) West 540 km/hr North 610.4 km/hr West 945 km North 1068.2 km (10) x: 20.5 y: 13.3 24.4 at 33.0° (32) 3.7 m (34) 7.7 m/s (36) 1.89 s (82) 1.87 m/s
4	(2) 725.2 N 125.8 N 273.8 N 0 N (8) 19 110 N 0.95 m (42) 46.0 m/s at 80.0°

5	(2) 0.893 0.832 (4) 42.0^0 (10) 4.17 m (16) 33.6 m/s (80) 0.364
6	(4) 1.57 m/s^2 (32) 1.58 m/s^2
7	(6) 1380 J 7200 J (18) $22x^2 - 10x$ (24) 22 J (56) $5.51 \times 10^9 \text{ J}$ (62) 21.4 m (74) 5.56 N/m
8	(12) 1.28 m (14) 6.44 m/s (18) 7.71 m/2 0.184 m (28) 334 J (30) 16.6 m/s 0.612 N (56) 33.8 s (58) 509 N
9	(2) 9.93 m/s (6) 0.803 m/s (18) 2233 N (56) 2.57 m (80) 0.303 m
10	(12) 464 m/s 185 m/s 311 m/s (30) 1.2 mN (70) 70 J
11	(2) $7.12 \text{ kg} \cdot \text{m}^2/\text{s}$ 1.19 mN (6) 1.33 (26) $-62\hat{i} + 20\hat{j} + 40\hat{k}$ (68) 34.4 kg
12	(4) 45.9 kg (12) 0.254 m (14) $T = 620 \text{ N}$ $F_H = 508 \text{ N}$ $\theta = -0.64^\circ$ (40) Stress = $1.54 \times 10^5 \text{ N/m}^2$ Strain = 3.08×10^{-6} $2.65 \times 10^{-5} \text{ m}$ (50) $3.29 \times 10^{-5} \text{ m}^2$ $2.68 \times 10^{-3} \text{ m}$ (68) $m(D) = 0.0554 \text{ kg}$ $m(C) = 0.194 \text{ kg}$ $m(A) = 0.249 \text{ kg}$

13	(10) 135 mmHg (16) 7.02×10^5 Pa 71.6 m (26) 57% (28) 1.794×10^5 N 2.058×10^5 N (44) 0.905 m/s
17	(10) 2.7×10^{-6} m Steel: 1.6×10^{-4} m