

Chapter 35 End-of-Chapter Problems

Halliday & Resnick, 10th Edition

Donald Aingworth IV

Hit me where it Matters

1 Problem 1

In Fig. 35-31, a light wave along ray r_1 reflects once from a mirror and a light wave along ray r_2 reflects twice from that same mirror and once from a tiny mirror at distance L from the bigger mirror. (Neglect the slight tilt of the rays.) The waves have wavelength 620 nm and are initially in phase. (a) What is the smallest value of L that puts the final light waves exactly out of phase? (b) With the tiny mirror initially at that value of L , how far must it be moved away from the bigger mirror to again put the final waves out of phase?

1.1 Solution

2 Problem 3

2.1 Solution

3 Problem 5

3.1 Solution

4 Problem 9

4.1 Solution

5 Problem 15

5.1 Solution

6 Problem 17

6.1 Solution

7 Problem 19

7.1 Solution

8 Problem 23

8.1 Solution

9 Problem 25

9.1 Solution

10 Problem 27

10.1 Solution

11 Problem 29

11.1 Solution

12 Problem 31

12.1 Solution

13 Problem 35

13.1 Solution

14 Problem 39

14.1 Solution

15 Problem 43

15.1 Solution

16 Problem 45

16.1 Solution

17 Problem 51

17.1 Solution

18 Problem 63

18.1 Solution

19 Problem 69

19.1 Solution

20 Problem 71

20.1 Solution

21 Problem 73

21.1 Solution

22 Problem 75

22.1 Solution

23 Problem 85

23.1 Solution

24 Problem 91

24.1 Solution

25 Problem 103

25.1 Solution

Contents

1 Problem 1	2
1.1 Solution	2
2 Problem 3	3
2.1 Solution	3
3 Problem 5	4
3.1 Solution	4
4 Problem 9	5
4.1 Solution	5
5 Problem 15	6
5.1 Solution	6
6 Problem 17	7
6.1 Solution	7
7 Problem 19	8
7.1 Solution	8
8 Problem 23	9
8.1 Solution	9
9 Problem 25	10
9.1 Solution	10
10 Problem 27	11
10.1 Solution	11
11 Problem 29	12
11.1 Solution	12
12 Problem 31	13
12.1 Solution	13
13 Problem 35	14
13.1 Solution	14

14 Problem 39	15
14.1 Solution	15
15 Problem 43	16
15.1 Solution	16
16 Problem 45	17
16.1 Solution	17
17 Problem 51	18
17.1 Solution	18
18 Problem 63	19
18.1 Solution	19
19 Problem 69	20
19.1 Solution	20
20 Problem 71	21
20.1 Solution	21
21 Problem 73	22
21.1 Solution	22
22 Problem 75	23
22.1 Solution	23
23 Problem 85	24
23.1 Solution	24
24 Problem 91	25
24.1 Solution	25
25 Problem 103	26
25.1 Solution	26