

Projectile Mathematics

Apprentice Difficulty Level

Question 1

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	V_{ox}	V_{oy}	t_{up}	t_{total}	d_x	d_{y-peak}
A	12.5	19.6	2.0			
B	15.0	29.4		6.0		
C	14.6	25.2				
D	21.2	12.6				
E	44.5	32.8				

Question 2

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	V_{ox}	V_{oy}	t_{up}	t_{total}	d_x	d_{y-peak}
A	15.0	19.6	2.0			
B	17.5	29.4		6.0		
C	24.2	17.8				
D	18.2	23.7				
E	48.1	36.2				

Question 3

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	V_{ox}	V_{oy}	t_{up}	t_{total}	d_x	d_{y-peak}
A	18.0	19.6	2.0			
B	11.5	29.4		6.0		
C	23.5	14.9				
D	17.8	23.6				
E	48.0	36.2				

Question 4

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	V_{ox}	V_{oy}	t_{up}	t_{total}	d_x	d_{y-peak}
A	22.5	19.6	2.0			
B	14.0	29.4		6.0		
C	28.2	26.1				
D	17.9	22.5				
E	39.4	34.1				

Master Difficulty Level

Question 5

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	v_o	Θ	t_{up}	t_{total}	d_x	d_{y-peak}
A	22.0	30.0				
B	35.0	30.0				
C	32.8	24.4				
D			1.25		75.0	
E					52.6	14.5

Question 6

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	v_o	Θ	t_{up}	t_{total}	d_x	d_{y-peak}
A	18.0	30.0				
B	25.0	30.0				
C	34.2	26.8				
D			1.50		72.0	
E					48.2	13.2

Question 7

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	v_o	Θ	t_{up}	t_{total}	d_x	d_{y-peak}
A	16.0	30.0				
B	32.0	30.0				
C	38.2	34.5				
D			1.75		77.0	
E					54.5	15.7

Question 8

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	v_o	Θ	t_{up}	t_{total}	d_x	d_{y-peak}
A	24.0	30.0				
B	36.0	30.0				
C	44.2	38.1				
D			1.40		56.0	
E					65.2	32.6

Wizard Difficulty Level

Question 9

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	v_o	Θ	t_{up}	t_{total}	d_x	d_{y-peak}
A	38.8	56.2				
B			2.35		63.6	
C					70.8	16.9
D	46.2					28.2
E		22.0			18.6	

Question 10

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	v_o	Θ	t_{up}	t_{total}	d_x	d_{y-peak}
A	36.2	61.8				
B			2.55		72.2	
C					78.2	14.0
D	36.8					17.8
E		18.0			12.4	

Question 11

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	v_o	Θ	t_{up}	t_{total}	d_x	d_{y-peak}
A	42.5	66.7				
B			2.82		68.4	
C					88.4	12.8
D	34.1					14.2
E		16.0			15.4	

Question 12

A projectile is launched at an Θ above the horizontal and lands at the same height it was launched. Use the given information to complete the remainder of the table.

	v_o	Θ	t_{up}	t_{total}	d_x	d_{y-peak}
A	38.9	62.8				
B			3.12		82.4	
C					94.3	18.5
D	37.2					16.6
E		14.0			10.6	