

Lorissa Gallardo
Physics 135-A
Midterm Fall 2021

Section 1: Estimations and Unit Analysis

1. C: 330 m/s, 1200 km/hr
2. B: 250,000 cm³
3. B: 28 m/s
4. B: 9.0 g cm⁻³, copper

Section 2: Vectors

1. A: $5\sqrt{3}\mathbf{i} + 5\mathbf{j}$
2. D: $-20\mathbf{i}$
3. C: $-2\mathbf{i} + 1.5\mathbf{j}$ (km)

Section 3: Motion Along a Straight Line

1. D: The particle has a positive, constant velocity
2. A: 2 m/s
3. C: 12 m/s
4. B: 14 m/s²
5. a) B: 2 seconds b) B: 10 meters c) C: 11 seconds

Section 4: Motion in Two and Three Dimensions

1. A: 5 m/s
2. C: 160 m
3. B: 5.5 seconds

Section 5: Forces

1. B: 8 N/m
2. B: 1 m/s²
3. Dawn Dish Soap