

Key

Physics 112
Chapter 2: Questions for Velocity vs. Time Graph

1. The maximum speed of the object is 24 m/s
2. The maximum velocity of the object is 24 m/s, W
3. The total time that the object is stopped is 15 s
4. What is the velocity of the object at:
 - (a) $t = 25$ s? 12 m/s, E
 - (b) $t = 85$ s? 12 m/s, W
5. What is the acceleration of the object at:
 - (a) $t = 5$ s? 1.8 m/s², E
 - (b) $t = 30$ s? 1.2 m/s², W
 - (c) $t = 50$ s? 2.4 m/s², W
 - (d) $t = 65$ s? 0 m/s²
 - (e) $t = 90$ s? 1.2 m/s², E
 - (f) $t = 145$ s? 1.0 m/s², W
6. How much time is spent by the object traveling east? $\frac{315}{50s}$ west? $\frac{45}{50s}$
7. What is the final displacement of the object? 190 m, E
8. What is the total distance traveled by the object? 1870 m
9. What is the average velocity of the object during the 150 s trip? 1.27 m/s, E
10. What is the average speed of the object during the 150 s trip? 12.5 m/s
11. What is the average acceleration for the object between 25 s and 125 s? 0.080 m/s², E
12. What is the average velocity of the object between 45 s and 95 s? 16.8 m, W
5