Gravity and Uniform Acceleration Worksheet (Solutions)

1. $\vec{a}_{av}$ = 1.8 m/s^2 [E]

2. $\vec{a}_{av}$ = 3.8 x 10^3 m/s^2 [bwd]

3. a) $\vec{v}_f$ = 66 m/s [W]
   b) $\Delta\vec{d}$ = 3.0 x 10^2 m [W]

4. Δt = 1.0 x 10^1 s

5. a) Δt = 0.82 s
   b) $\Delta\vec{d}$ = 13 m [S]

6. $\vec{a}_{av}$ = 4.9 m/s^2 [S]
   $\vec{v}_i$ = 27 m/s [N]

7. $\vec{v}_f$ = 6.0 x 10^1 m/s [fwd]

8. $\vec{v}_i$ = 88 m/s [fwd]

9. $\vec{a}_{av}$ = 7.3 m/s^2 [fwd]

10. a) $\vec{v}_f$ = 39 m/s [down]
    b) $\Delta\vec{d}$ = 78 m [down]

11. $\Delta\vec{d}$ = 1.2 m [down]

12. a) Δt = 0.45 s
    b) $\vec{v}_f$ = 4.4 m/s [up]

13. a) Δt = 2.8 s
    b) $\Delta\vec{d}$ = 37 m [up]