Alex Yeoh

2a. $12-7=5$

b. $12-7=5$

c. $7-12=-5$

11a. $\frac{121\text{ km}}{18\text{ min}}=\frac{3}{3}\frac{\text{km}}{\text{min}}=40\frac{\text{km}}{\text{hr}}$

b. $\frac{10.3\text{ km}}{18\text{ min}}=0.572\frac{\text{km}}{\text{min}}=34.3\frac{\text{km}}{\text{hr}}$

c. AVG speed: $S=\frac{d}{t}=\frac{2.12}{7.5}=3.20\frac{\text{km}}{\text{hr}}$

AVG velocity: $\frac{\text{displacement}}{t}=\frac{0}{t}=0\frac{\text{km}}{\text{hr}}$

22. $V=V_0+at=0+6.2\cdot10^5(8.1\cdot10^{-4})=502\frac{m}{s}$

29a. $V=V_0+at=4+0.0500(8\cdot60)=28.0\text{ m/s}$

b. $0=28+(-0.550)t$

$-28=-0.550t$

$t=50.9\text{ s}$

c. Accelerating: $d=d_0+V_0t+\frac{1}{2}at^2=0+4(8\cdot60)+\frac{1}{2}(0.0500)(8\cdot60)^2=7680\text{ m}=7.68\cdot10^3\text{ m}$

d. Deceleration: $d=d_0+\frac{1}{2}(V_0+V)t=0+\frac{1}{2}(28+0)(50.9)=712.6\text{ m}=713\text{ m}$

39. $V=V_0+at$

$60=0+a(4/3600)$

$a=54000\text{ mi/hr}^2$

$(183.58/54000)3600=12.24\text{ s}$

$d=d_0+\frac{1}{2}(V_0+V)t=0+\frac{1}{2}(0+183.58)\frac{12.24}{3600}=0.312\text{ mi}$

$5-0.312=4.688\text{ mi}$

$4.688=\frac{1}{2}(183.58+143.58)t$

$t=0.0285\text{ hr}=91.93$

$t_{total}=12.24+91.93=104.17\text{ s}=104\text{ s}$