22. For the automobile $\Delta v = 55 - 25 = 30\,\text{km/h}$, which we convert to SI units:

$$a = \frac{\Delta v}{\Delta t} = \frac{(30\,\text{km/h})\left(\frac{1000\,\text{m/km}}{3600\,\text{s/h}}\right)}{(0.50\,\text{min})(60\,\text{s/min})} = 0.28\ \text{m/s}^2\ .$$

The change of velocity for the bicycle, for the same time, is identical to that of the car, so its acceleration is also $0.28\ \text{m/s}^2$.