

$$2. a. \text{Seedup} = \frac{\text{Execution time old}}{\text{Execution time new}} = \frac{1}{(1 - \text{Fraction}) + \frac{\text{Fraction}}{\text{Seedup}}}$$

$$= \frac{1}{(1 - 0.2) + \frac{0.2}{2}} = 1.11$$

$$b. \text{Seedup} = \frac{\text{Execution time old}}{\text{Execution time new}} = \frac{1}{(1 - \text{Fraction}) + \frac{\text{Fraction}}{\text{Seedup}}}$$

$$= \frac{1}{(1 - 0.2 - 0.1) + \frac{0.2}{2} + \frac{0.1}{2/3}} = 1.05$$

$$c. \frac{0.2/2}{(1 - 0.2 - 0.1) + \frac{0.2}{2} + \frac{0.1}{2/3}} = 10.5\%$$

$$\frac{0.1/(2/3)}{(1 - 0.2 - 0.1) + \frac{0.2}{2} + \frac{0.1}{2/3}} = 15.8\%$$