

$$\begin{aligned}
 1. \text{ reqd. ratio} &= \frac{5 \times 100^2}{50 \cancel{1}} \\
 &= \frac{10}{1} \\
 &= 10:1
 \end{aligned}$$

$$1(b) \quad 15 \text{ kg} = 15 \times 1000 \text{ g}$$

$$\begin{aligned}
 \text{required ratio} &= \frac{5 \times 15 \times 1000 \cancel{0}}{7 \cancel{210}} \\
 &= \frac{500}{7} \\
 &= 500:7
 \end{aligned}$$

$$1(c) \quad 9 \text{ m} = 9 \times 100 \text{ cm}$$

$$\begin{aligned}
 \text{required ratio} &= \frac{1 \times 9 \times 100}{27 \cancel{3}} \\
 &= \frac{100}{3}
 \end{aligned}$$

$$\begin{aligned}
 1(d) \quad 30 \text{ days} &= 30 \times 24 \text{ h} \\
 \text{reqd. ratio} &= \frac{10 \times 30 \times 24^2}{36 \cancel{3}} \\
 &= \frac{20}{1} \\
 &= 20:1
 \end{aligned}$$

$$② \quad \text{let reqd. no. of computers} = x$$

$$3:6 :: x:24$$

$$\Rightarrow \frac{3}{6} = \frac{x}{24}$$

$$\begin{aligned}
 \Rightarrow x &= \frac{3 \times 24}{\cancel{6} \cancel{1}} \\
 &= 12
 \end{aligned}$$

③; no. of persons per sq. km for Rajasthan

$$= \frac{\text{Population}}{\text{area}}$$

$$= \frac{190 \times 570 \times 100000 \cancel{0}}{3 \times 100000 \cancel{0}}$$

$$= 190$$

no. of persons per sq. km for U.P.

$$= \frac{830 \times 1660 \times 100000 \cancel{0}}{2 \times 100000 \cancel{0}}$$

$$= 830$$

④ Rajasthan