

## Correction Standards

1<sup>st</sup> exercise:

$$1) A = \frac{7}{9} \times \frac{2}{7} - \left(\frac{5}{3} - 1\right)^2$$

$$= \frac{1}{9} - \left(\frac{5-3}{3}\right)^2 = \frac{1}{9} - \left(\frac{2}{3}\right)^2 = \frac{1}{9} - \frac{4}{9} = -\frac{3}{9}$$

$$\therefore A = -\frac{1}{3}$$

$$2) B = \frac{8 \times 10^2 \times 5 \times 10^4}{12 \times (10^3)^3} = \frac{5 \times 10^6}{4 \times 10^9} = \frac{5}{4 \times 10^3} = \frac{5}{2^2 \times (2^3 \times 5^3)}$$

$$B = \frac{5}{2^5 \times 5^3} = 2^{-5} \times 5^{-2} \quad \text{So, } m = -5 \text{ \& } n = -2.$$

$$\text{Now, } B = -2^{-5} \times 5^{-2} = 2^{-3} \times 2^{-2} \times 5^{-2} = \frac{1}{2^3} \times (2 \times 5)^{-2}$$

$$= \frac{1}{8} \times 10^{-2} = 0.125 \times 10^{-2}$$

$$\therefore B = 0.00125 \text{ in decimal form}$$

$$3) C = \sqrt{250} - \sqrt{490} + 2\sqrt{81}$$

$$= \sqrt{25 \times 10} - \sqrt{49 \times 10} + 2\sqrt{9^2}$$

$$= 5\sqrt{10} - 7\sqrt{10} + 18$$

$$\therefore C = 18 - 2\sqrt{10}$$

$$\text{The inverse of } C \text{ is } \frac{1}{C} = \frac{1}{(18 - 2\sqrt{10})} \times \frac{(18 + 2\sqrt{10})}{(18 + 2\sqrt{10})}$$

$$\therefore \frac{1}{C} = \frac{18 + 2\sqrt{10}}{(18)^2 - (2\sqrt{10})^2}$$