

## Solution of the day/ August 19, 2019

### 6<sup>th</sup> Class

- **Mathematics:** Ans : (B)

Smallest 15 whole are 0, 1, 2, 3, 4,..... 14. As these numbers contain zero, so, product will be zero.

- **Physics:** Ans: (D)

- **Chemistry:** Ans: (A)

- **Biology:** Ans: (C)

### 7<sup>th</sup> Class

- **Mathematics :** Ans : (D)

$$\begin{aligned}(5x + 3y)^3 &= (5x)^3 + 3 \times 5^2 \cdot x^2 \times 3y + 3 \cdot 5x \cdot 9y^2 + (3y)^3 \\ &= 125x^3 + 225x^2y + 135xy^2 + 27y^3\end{aligned}$$

- **Physics:** Ans: (C)

- **Chemistry:** Ans: (B)

- **Biology:** Ans: (D)

### 8<sup>th</sup> class

- **Mathematics:** Ans: (D)

Total amount = Rs. 36

Age of Shreya = 15 years, Age of Bhoomika = 12 years

$$\text{Ratio of ages} = 15 : 12 = \frac{15 \div 3}{12 \div 3} = \frac{5}{4} = 5 : 4$$

Therefore', Shreya's share = Rs.  $36 \times \frac{5}{9} = 4 \times 5 = \text{Rs.} 20$

Bhoomika's share =  $36 \times \frac{4}{9} = 4 \times 4 = \text{Rs.} 16$

- **Physics:** Ans : (D)

- **Chemistry:** Ans: (D)

$H_2$  will not reduce heated  $Al_2O_3$

- **Biology:** Ans: (B)

## 9<sup>th</sup> Class

- **Mathematics :** Ans : (B)

$\angle PQS = 60^\circ$  and  $\angle RQS = 60^\circ$

[ $\because \angle PQS$ ,  $\angle PAB$  and  $\angle RQS$ ,  $\angle RCD$  are two pairs of corresponding angles]

$\therefore \angle PQR = 120^\circ$

$\therefore \angle XQY = 120^\circ$  [ $\because \angle PQR$  and  $\angle XQY$  are vertically opposite angles]

$\therefore \angle QXY + \angle QYX = 60^\circ$  [ $\because \angle XQY$ ,  $\angle QXY$  and  $\angle QYX$  are angles in a triangle]

- **Physics:** Ans : (C)

- **Chemistry:** Ans: (C)

- **Biology:** Ans: (B)

## 10<sup>th</sup> class

- **Mathematics:** Ans : (C)

Let the cost price of a shirt be Rs x and that of a trouser be Rs y.

According to the given condition:

$$-10\% \text{ of } x + 20\% \text{ of } y = 115 \Rightarrow -0.1x + 0.2y = 115 \Rightarrow -x + 2y = 1150 \quad (\text{i})$$

$$20\% \text{ of } x - 10\% \text{ of } y = 10 \Rightarrow 0.2x - 0.1y = 10 \Rightarrow 2x - y = 100 \quad (\text{ii})$$

Multiplying (i) with 2 and then adding with (ii):

$$3y = 2400 \Rightarrow y = 800$$

Substituting the value of y in (ii):

$$2x - 800 = 100 \Rightarrow 2x = 900 \Rightarrow x = 450$$

Thus, total cost of a shirt and a trouser = Rs  $(800 + 450)$  = Rs 1,250

- **Physics:** Ans: (C)

- **Chemistry:** Ans: (C)

- **Biology:** Ans: (D)

- **Reasoning :** Ans: (B)