

### Statement Test – 3

1. The ratio of the cost price of article A to B is 3:2. The marked price of both articles is Rs. 2000 each. Both articles are sold at 25% profit each. If the discount given on article A is half of that on article B, then find the difference between the selling price of both articles.

1.Rs. 400 2.Rs. 500 3.Rs. 300 4.Rs. 200 5.Rs. 600

2. A vessel contains a mixture of milk and water in the ratio of 2:1. If 20% is taken out from the vessel and replaced with the same quantity of water, then the quantity of milk in the final mixture will be 10 ml more than that of water. Find the initial mixture.

1.120 ml 2.210 ml 3.180 ml 4.150 ml 5.240 ml

3. The ratio of the present ages of P to R is 5:7. Also, the difference between the present ages of P and Q is equal to the difference between the present ages of Q and R. P is younger than Q, who is younger than R. The average present age of all three persons together is 30 years. The present age of which of the following persons can be determined? i) P ii) Q iii) R

1.Only i) 2.Both ii) and iii) 3.Only ii) 4.All i), ii) and iii) 5.None of these

4. A started a business with Rs. (X) and after 8 months, B also joined with Rs. (X + 500) and at the same time, A withdrew Rs. 500. At the end of the year, the total profit earned by both of them is Rs. 30000, out of which B received Rs. 10000. Find the initial investment made by A.

1.Rs. 2000 2.Rs. 2500 3.Rs. 1000 4.Rs. 3000 5.Rs. 1500

5. The time taken by P, Q and R to complete a work is (X) days, (X - 4) days and 10 days respectively. If the total work is 120 units, while Q and R together can complete 90% of the total work in 4 days, then find the time taken by P to complete the work alone.

1.12 days 2.10 days 3.15 days 4.20 days 5.Cannot be determined

6. The downstream and upstream speed of the boat is (X) km/hr and 24 km/hr respectively. The time taken by the boat to cover 128 km downstream and (128 - X) km upstream distance is the same. Find the speed of the river. (X < 50)

1.2 km/hr 2.3 km/hr 3.5 km/hr 4.4 km/hr 5.6 km/hr

7. A three-digit number ABC, when divided by C, then the digit sum of the resultant value will not be exactly divisible by 3. A, B and C are consecutive integers. Find the product of the digits of ABC. (6 > A > B > C > 0)

1.30 2.60 3.40 4.50 5.more than one

8. The lengths of train A and B are (X) meters and (Y) meters respectively and the speeds of trains A and B are 30 m/sec and 20 m/sec respectively. The time taken by both trains to cross each other when running in the opposite direction is 10 seconds. Also, both trains can cross their own length at the same time. Find the value of (X - Y).

1.100 2.120 3.160 4.180 5.150

9. The time taken by pipe A to fill the tank is (m) minutes, where pipes A and B together can fill the same tank in 60 minutes. The total capacity of the tank is 60 ml and pipe B is an outlet pipe. If the efficiency of pipe B is (n), then find the value of (m).

1.(60 - mn) 2.(60/mn) 3.(60 - 2n) 4.(60 - 3m) 5.Cannot be determined

10. Pipe A can fill a tank in 12 minutes and ratio of efficiency of pipe B to pipe C is 8 : 9. Pipe A and C together will fill 2 liters/minute more water in tank than that of pipe A and B together. Time taken by pipe B and C together to fill the same tank is 72/17 minutes. Find the time taken by pipe A and pipe C together to fill the tank.

1. 5 1/7 min 2. 3 2/3 min 3. 3 7/9 min 4. 4 4/5 min 5. 4 2/5 min

11. Pipe A is 33 1/3% more efficient than pipe B. Pipe C can empty the tank at rate 40 liter/hour. Mohit opened pipe A and pipe B for 137 hours and tank was filled 10 liters less than the 75% of its capacity. After that he also opened the pipe C and now the tank was filled in an hour. Find the time in which pipe C alone could empty the completely filled tank.

1. 8 hours 2. 9 hours 3. 9.5 hours 4. 8.5 hours 5. Can't be determined

12. A vessel contains mixture of milk and water, in which ratio of milk to total mixture in the ratio of 3:4. When some quantity of juice is added in the vessel, then final mixture contains 50% milk. Which of the following option(s) is/are correct.

I. If quantity of water is 10 liters, then the quantity of juice is 20 liters.

II. The respective ratio of water, milk and juice is 1:3:1.

III. The difference between the quantity of milk and water is equal to the quantity of juice added.

1. Only I 2. Only II 3. Both I & II 4. Both I & III 5. All the options are correct.

13. In a vessel A, quantity of spirit was 12 liters more than that of water. After adding 'y' liter

of mixture having water and spirit in the ratio of 3: 5 in the vessel A, ratio of water and spirit in the final mixture becomes 9:13. Which of the option is correct regarding quantity of mixture in vessel A and value of 'y'? 1. 96 liters, 80 liters 2. 84 liters, 72 liters 3. 114 liters, 128 liters 4. Both (a) and (b) 5. Both (a) and (c)

14. Vessel A contains 80 liters of pure milk and B contains 66 liters water. From vessel A, 42 liter of milk is taken out and poured into vessel B and then 72 liters of mixture from vessel B taken out and poured into vessel A. Find the ratio of difference of final quantity of milk in both the vessel to final quantity of water in vessel B.

1. 13:11 2. 11:26 3. 11:13 4. 12:11 5. 26:11

15. Ratio of cost price of two items P and Q is 2:5. Item P and Item Q are marked 25% above and 30% above their respective cost price. If the ratio of discount percent allowed on item P to item Q is 1:2 and profit made on the items P & Q is 12.5% & 4% respectively, then find which of the following statement/s is /are true. (Note: discount percentage on item P is 'd' %)

(i) Value of 'd' is odd number. (ii) Value of 'd' is prime number. (iii) 'd' is less than 12 and greater than 8. 1. Only (ii) 2. Both (i) & (iii) 3. Both (i) & (ii) 4. Only (iii) 5. All of these above

16. A Shopkeeper sells an article at \_\_\_\_\_% discount. If he had sold the article without allowing discount, then he would have earned \_\_\_\_\_% profit. Difference in discounted and non-discounted selling price is Rs. 80 and difference between marked price & cost price of the article is Rs. \_\_\_\_\_. Find which of the following value/s will come in the place of blank respectively.

(i) 25, 60, 120 (ii) 20, 25, 80 (iii) 50, 20, 26

1. Only (ii) 2. Both (ii) & (iii) 3. Both (i) & (iii) 4. Only (i) 5. Both (i) & (ii)

17. Present age of B is x years and age of A is twice the age of B. C is 6 years elder to A. Ratio of present age of C to D is 13:16 and six years hence, average age of B and C is Y years. If the age of A, B, C & D are an integer and age of each person less than 70 years, then find the possible value of Y.

1. 24 years 2. 43.5 years 3. 20 years 4. All of these 5. Both (a) and (b)

18. Income of A and B is 5000 and 7000 respectively and ratio of their expenditure is 7:6. saving of C is 5000 which is 25% more than that of B. find the expenditure of A.

(A) 4200 (B) 3500 (C) 2100 (D) 1400 (E) None of these

19. The marked price of a mobile is 13000, if shopkeeper give two successive discount of 15% and X% respectively. Then the selling price of mobile will be 9555. find the value of x.

(A) 16% (B) 14% (C) 10% (D) 28% (E) None of these

20. Average age of A, B, and C is 2p and average of BC is 2p + 2. if b is 4 year older than A and D is 2 year older than C. then age of D will be \_\_\_\_.

(A) 2p+6 (B) 3p-4 (C) p+6 (D) 4p+3 (E) None of these

21. A, B and C invested their capital in the ratio of 7:5:9. the ratio of months for which A, B and C invested is 2:3:4. if C get (p+1200) more than B. then profit share of A is 2800. find the value of 2/3 of x ?

(A) 4800 (B) 2000 (C) 6400 (D) 5800 (E) None of these

22. The average number of Apple in 10 basket in a room is 15 if one basket is taken out from it and two more basket are added in which the number of Apples are 27 and 22 respectively then the average number increased by 'M'. Which of the following is true for M.

1. M is more than 10. 2. M is divisible by 3.

(A) Only (i) (B) Only (ii) (C) Both (i) and (ii) (D) Either (i) and (ii) (E) None of these

23. A laptop having cost price of Rs 17000 was marked 15% above its cost price and sold after offering a discount of x% such that the average of selling price of the laptop and a microwave was Rs 20922. If the microwave was sold at a profit of x% and the cost price of microwave is Rs 22000, then find the value of "2x + 6".

(A) 30 (B) 52 (C) 43 (D) 28 (E) None of these

24. A car covered 40% distance at 20km/hr, 33.33% of the remaining distance at 18 km/hr and the remaining distance at 36 km/hr such that it took total 19 hours for the entire journey. A bike must travel at what speed to cover the entire distance which was covered by the car in 15 hours.

(A) 27 km/hr (B) 30 km/hr (C) 45 km/hr (D) 36 km/hr (E) None of these

25. Nupur lent out Rs 60000 at X% per annum simple interest for 2 years. What is the value of X? Statement 1:-He earned Rs 15000 as interest.

Statement 2:- Had he lent out at 'X' % per annum compound interest (compounded annually), he would have earned Rs P more.

(A) Only I is sufficient (B) Only II is sufficient (C) Both I and II together are necessary (D) Either of them is sufficient (E) None of these

**1. Answer: B**

Let the cost price of articles A and B be Rs. 300X and Rs. 200X respectively.

**Article A**

The C.P. = Rs. 300X

The M.P. = Rs. 2000

The S.P. = 125% of 300X = Rs. 375X

The discount = (2000 - 375X)

**Article B**

The C.P. = Rs. 200X

The M.P. = Rs. 2000

The S.P. = 125% of 200X = Rs. 250X

The discount = (2000 - 250X)

Now,

$$(2000 - 375X)/(2000 - 250X) = 1/2$$

$$4000 - 750X = 2000 - 250X$$

$$500X = 2000$$

$$X = 4$$

The required difference = (375X - 250X) = 125X = (125 \* 4) = Rs. 500.

Hence, the correct answer is option B.

**2. Answer: D**

Let the initial milk and water in the vessel be 200X ml and 100X ml respectively.

**Final mixture**

The quantity of milk = 80% of 200X = 160X ml

The quantity of water = (80% of 100X) + (20% of 200X + 100X) = 80X + (20% of 300X) = (80X + 60X) = 140X

Now,

$$160X - 140X = 10 \text{ ml}$$

$$20X = 10$$

$$X = 0.50$$

The initial mixture = 300X = (300 \* 0.50) = 150 ml.

Hence, the correct answer is option D.

**3. Answer: D**

Let the present ages of P and R be 5n years and 7n years respectively. Also let the present age of Q be Q.

Given that,

$$Q - 5n = 7n - Q$$

$$2Q = 12n$$

$$Q = 6n$$

So, the present age of Q = 6n

Now,

$$5n + 6n + 7n = 3 * 30$$

$$18n = 90$$

$$n = 5$$

The present ages of,

$$P = 5n = (5 * 5) = 25 \text{ years}$$

$$Q = 6n = (6 * 5) = 30 \text{ years}$$

$$R = 7n = (7 * 5) = 35 \text{ years}$$

All i), ii) and iii) can be determined.

Hence, the correct answer is option D.

**4. Answer: E**

Investment of A = (X \* 8) + (X - 500) \* 4 = 8X + (4X - 2000) = Rs. (12X - 2000)

Investment of B = (X + 500) \* 4 = Rs. (4X + 2000)

The profit received by A = (30000 - 10000) = Rs. 20000

The profit received by B = Rs. 10000

The ratio of the profit share of A to B = 20000:10000 = 2:1.

So,

$$(12X - 2000)/(4X + 2000) = 2/1$$

$$12X - 2000 = 8X + 4000$$

$$4X = 6000$$

$$X = 1500$$

The initial investment of A = X = Rs. 1500.

Hence, the correct answer is option E.

**5. Answer: A**

The total work = 120 units

The efficiency of R = 120/10 = 12 units/day

The work done by Q and R together = 90% of 120 = 108 units

The work done by R = (4 \* 12) = 48 units

The work done by Q = (108 - 48) = 60 units

The efficiency of Q = 60/4 = 15 units/day

The time taken by Q to complete the work alone = 120/15 = 8 days

Given that,

$$X - 4 = 8$$

$$X = 12$$

The time taken by P to complete the work alone = X = 12 days.

Hence, the correct answer is option A.

**6. Answer: D**

Distance/Speed = Time

Given that,

$$128 / X = (128 - X) / 24$$

$$128 / X = (128 - X) / 24$$

$$128X - X^2 = 3072$$

$$X^2 - 128X + 3072 = 0$$

$$X^2 - 96X - 32X + 3072 = 0$$

$$X(X - 96) - 32(X - 96) = 0$$

$$(X - 32)(X - 96) = 0$$

$$X = + 32 \text{ or } + 96$$

$$X = 32 \text{ (given } X < 50)$$

So, the downstream speed = X = 32 km/hr

The speed of the river = (32 - 24)/2 = 8/2 = 4 km/hr.

Hence, the correct answer is option D.

**7. Answer: B****Case I**

$$A = 5$$

$$B = 4$$

$$C = 3$$

$$543/3 = 181$$

$$(1 + 8 + 1) = 10 \text{ (not divisible by 3)}$$

**Case II**

$$A = 4$$

$$B = 3$$

$$C = 2$$

$$432/2 = 216$$

$$(2 + 1 + 6) = 9 \text{ (divisible by 3)}$$

**Case III**

$$A = 3$$

$$B = 2$$

$$C = 1$$

$$321/1 = 321$$

$$(3 + 2 + 1) = 6 \text{ (divisible by 3)}$$

Only case I follow.

So, ABC = 543

Required product = (5 \* 4 \* 3) = 60.

Hence, the correct answer is option B.

**8. Answer: A**

When both trains are crossing each other,

$$(X + Y)/(30 + 20) = 10$$

$$X + Y = 10 * 50$$

$$X + Y = 500$$

Total length of both trains = 500 m

Also, given that,

Time = Distance/Speed

$$X/30 = Y/20$$

$$30Y = 20X$$

$$X:Y = 3:2$$

$$X = 3/5 \text{ of } 500 = 300$$

$$Y = 2/5 \text{ of } 500 = 200$$

$$\text{Required value} = (X - Y) = (300 - 200) = 100.$$

Hence, the correct answer is option A.

### 9. Answer: A

The total capacity of the tank = 60 ml

The efficiency of pipe A = (60/m)

The efficiency of pipe B = n

Now, the efficiency of (A + B) = (60/m) - (n)

So,

$$(60/m) - n = 60/60$$

$$(60 - mn) / m = 1$$

$$m = (60 - mn).$$

Hence, the correct answer is option A.

### 10.Explanation:

Let the efficiency of pipe A is Y liters/min

Pipe B is 8x liters/min

Pipe C is 9x liters/min

ATQ,

$$Y + 9x - (Y + 8x) = 2 \text{ liters}$$

$$x = 2 \text{ liters}$$

Therefore,

Efficiency of pipe B is 16 liters/min

Efficiency of Pipe C is 18 liters/min

Together they take  $\frac{72}{17}$  minutes to fill the tank.

Therefore, volume of tank

$$= 34 \times \frac{72}{17}$$

$$= 144 \text{ liters}$$

$$\text{Efficiency of pipe A} = Y = \frac{144}{12} = 12 \text{ liters/minutes}$$

### 11.Explanation:

Let efficiency of pipe B is 6x/hour

And that of pipe A is 8x/hour

Water filled in the tank when all three pipes were opened for an hour = 6x + 8x - 40

$$= 14x - 40 \text{ ltr. (This is 25\% of volume of tank + 10 liters)}$$

$$\text{Water filled in tank in initial } \frac{13}{7} \text{ hours} = 14x \times \frac{13}{7} = 26x \text{ liters}$$

$$\text{Total volume of tank} = 14x - 40 + 26x = 40x - 40.$$

$$\text{Now 25 \% of this total volume} = \frac{25}{100} \times (40x - 40) = 10x - 10$$

ATQ,

$$10x - 10 + 10 = 14x - 40$$

$$4x = 40$$

$$x = 10 \text{ liters}$$

Hence, volume of tank is 4x - 40 = 400 - 40 = 360 litres.

Hence, C will empty the tank =  $\frac{360}{40} = 9$  hours.

### 12.Explanation:

Let quantity of milk in the vessel be 30x liters

Total quantity of mixture = 40x liters

So, quantity of water in the vessel = 40x - 30x = 10x liters

Let the quantity of juice be 'w' liter.

$$\frac{30x}{10x+w} = \frac{1}{1}$$

$$30x = 10x + w$$

$$w = 20x$$

From option (I).

ATQ,

$$10x = 10$$

$$x = 1$$

So, quantity of juice = 20x = 20 liters

So, option (I) is correct.

From option (II).

The respective ratio = 10x: 30x: 20x = 1: 3: 2

So, option (II) is incorrect.

From option (III).

ATQ,

$$30x - 10x = 20x$$

So, option (III) is correct.

### 13.Explanation:

Let quantity of water in vessel A be x liters

Then quantity of spirit in the vessel A = (x+12) lit

$$\text{Quantity of water added} = y \times \frac{3}{8} = \frac{3y}{8}$$

$$\text{And quantity of spirit added} = y \times \frac{5}{8} = \frac{5y}{8}$$

ATQ,

$$\frac{x + \frac{3y}{8}}{x + 12 + \frac{5y}{8}} = \frac{9}{13}$$

$$\frac{8x + 3y}{8x + 96 + 5y} = \frac{9}{13}$$

$$104x + 39y = 72x + 864 + 45y$$

$$32x - 6y = 864$$

$$16x - 3y = 432 \dots (1)$$

From option (a).

Total quantity of mixture in vessel A = 96 liter

So,

$$x + x + 12 = 96$$

$$x = 42$$

Put the value of x and y in (i)

$$16x - 3y = 432$$

$$16 \times 42 - 3 \times 80 = 432$$

Option (a) satisfy the equation.

### 14. Explanation:

Milk in vessel A = 80 liter

Water in vessel B = 66 liter

Now 42 liters of milk taken out and pour into B

Remaining milk in A = 80 - 42 = 38 liter

Ratio of milk to water in vessel B = 42:66 = 7:11

Quantity of milk taken out from B

$$= \frac{7}{18} \times 72 = 28 \text{ liter}$$

Quantity of water taken out from B

$$= \frac{11}{18} \times 72 = 44 \text{ liter}$$

Final quantity of milk in B = 42 - 28 = 14

Final quantity of water in B = 66 - 44 = 22 liter

Final quantity of milk in A = 38 + 28 = 66 liter

Required ratio = (66 - 14): 22 = 52:22 = 26:11

### 15.Explanation:

Let cost price of P & Q be 200x and 500x respectively

$$\text{Marked price of P} = 200x \times \frac{125}{100} = 250x$$

$$\text{Marked price of Q} = 500x \times \frac{130}{100} = 650x$$

ATQ,

$$\left[ 250x \times \frac{(100-d)}{100} + 650x \times \frac{(100-2d)}{100} \right] = 200x \times \frac{112.5}{100} + 500x \times \frac{104}{100}$$

$$[2.5x \times (100 - d) + 6.5x \times (100 - 2d)] = 225x + 520x$$

$$[250x - 2.5xd + 650x - 13xd] = 745x$$

$$155x = 15.5xd$$

$$10 = d$$

From (i)

$$d = 10$$

10 is not an odd number.

From (ii)

$$d = 10$$

10 is not a prime number.

From (ii)

$$d = 10$$

'd' is less than 12 and greater than 8.

So, only (iii)

From option (b).

Total quantity of mixture in vessel A = 84 liter

So,

$$x + x + 12 = 84$$

$$x = 36$$

Put the value of x and y in (i)

$$16x - 3y = 432$$

$$16 \times 36 - 3 \times 72 = 360$$

Option (b) does not satisfy the equation.

From option (c)

Total quantity of mixture in vessel A = 114 liter

So,

$$x + x + 12 = 114$$

$$x = 51$$

Put the value of x and y in (i)

$$16x - 3y = 432$$

$$16 \times 51 - 3 \times 128 = 432$$

Option (c) satisfy the equation.

**16. Explanation:**

From (i)

Let the marked price of an article be 'a'.

$$a - \left(\frac{75}{100} \times a\right) = 80$$

$$\frac{a}{4} = 80$$

$$a = \text{Rs. } 320$$

$$\text{Cost price of an article} = 320 \times \frac{100}{160}$$

$$= \text{Rs. } 200$$

$$\text{Difference between marked price \& cost price} = \text{Rs. } (320 - 200) = \text{Rs. } 120$$

So, (i) is possible to fill all the respective fillers

From (ii)

Let the marked price of an article be 'b'.

$$b - \left(\frac{80}{100} \times b\right) = 80$$

$$\frac{1b}{5} = 80$$

$$b = \text{Rs. } 400$$

$$\text{Cost price of an article} = 400 \times \frac{100}{125}$$

$$= \text{Rs. } 320$$

$$\text{Difference between marked price \& cost price} = \text{Rs. } (400 - 320) = \text{Rs. } 80$$

So, (ii) is possible to fill all the respective fillers

From (iii)

Let the marked price of an article be 'c'.

$$c - \left(\frac{50}{100} \times c\right) = 80$$

$$\frac{c}{2} = 80$$

$$c = \text{Rs. } 160$$

$$\text{Cost price of an article} = 160 \times \frac{100}{120}$$

$$= \text{Rs. } 133 \frac{1}{3}$$

$$\text{Difference between marked price \& cost price} = \text{Rs. } \left(160 - \frac{400}{3}\right) = \text{Rs. } \frac{80}{3}$$

$$= \text{Rs. } 26 \frac{2}{3}$$

So, (iii) is can't fill all the respective fillers

So, only (i) &amp; (ii)

**17. Explanation:**

Let the present age of A = 2x years

Present age of B = x

Present age of C = 2x + 6 ... (i)

Present age of D =  $\frac{16}{13}(2x + 6)$  ... (ii)

ATQ,

$$\frac{x+2x+6+6+6}{2} = y$$

$$\frac{3x+18}{2} = y$$

Age of each person is an integer and less than 70 years.

So, age of C should be the multiple of 13 and is even number to get the value of x integer

Present age of C = 2x + 6 = 26 (26 is the multiple of 13)

10 = x put in (ii)

Present age of D =  $\frac{16}{13}(2x + 6) = \frac{16}{13}(20 + 6) = 32 \text{ years}$  (i.e. less than 70 years)

$$\text{Value of } Y = \frac{3x+18}{2} = 24$$

Present age of C = 2x + 6 = 52 (52 is the multiple of 26)

$$23 = x$$

Present age of D =  $\frac{16}{13}(2x + 6) = \frac{16}{13} \times (52) = 64 \text{ years}$  (i.e. less than 70 years)

$$\text{Value of } Y = \frac{3x+18}{2} = 43.5$$

**18. B**

Let expenditure of A and B be 7x and 6x

Savings of B = 5000/1.25 = Rs 4000

As per question;

$$7000 - 6x = 4000$$

$$\Rightarrow 6x = 3000$$

$$\Rightarrow x = 5000$$

Expenditure of A = 7x = Rs 3500

**19. B**

SP = Rs 9555

$$\Rightarrow 0.85 \times (1 - x/100) \times 13000 = 9555$$

$$\Rightarrow (1 - x/100) = 0.86$$

$$\Rightarrow x/100 = 0.14$$

$$\Rightarrow x = 14 \%$$

**20. A**

$$\text{Sum of } A+B+C = 2p \times 3 = 6p$$

$$\text{Sum of } B+C = 2(2p+2) = 4p+4$$

$$\Rightarrow A = 6p - 4p - 4 = 2p - 4$$

$$\Rightarrow B = 2p - 4 + p = 2p \text{ and } C = 4p - 4 - 2p = 2p - 4$$

$$2p = 2p + 4$$

$$\text{Hence; } D = 2p + 4 + 2 = 2p + 6 \text{ years}$$

**21. B**

Let investment of A, B and C be 7k, 5k and 9k

Profit ratio of A:B:C

$$= 7k(2):5k(3):9k(4) = 14:15:36$$

As per question;

$$14 / (14 + 15 + 36) \times \text{Total profit} = 2800$$

$$\Rightarrow \text{Total Profit} = \text{Rs } 13000$$

Profit of ;

$$B = 15/65 \times 13000 = \text{Rs } 3000$$

$$C = \text{Rs } 13000 - 2800 - 3000 = \text{Rs } 7200$$

$$\text{So; } p + 1200 = 7200 - 3000$$

$$\Rightarrow P = 3000$$

$$\text{Therefore; } 2p/3 = 2000$$

**22. D**

Total apples in 10 basket = 15 x 10 = 150

Now; when basket is removed and 2 basket is added;

$$\text{New average} = (150 - 15 + 27 + 25) / (10 - 1 + 2) = 187/11 = 17$$

$$\Rightarrow M = 17$$

Hence, only 1

**23. A**

$$\text{MP of laptop} = 1.15 \times 17000 = \text{Rs } 19550$$

Sum of SP of laptop and microwave

$$= \text{Rs } 20922 \times 2 = \text{Rs } 41844$$

$$\Rightarrow 19550(1 - x/100) + 22000(1 + x/100) = 41844$$

$$\Rightarrow -195.5x + 220x = 294$$

$$\Rightarrow x = 12$$

$$\text{So } 2x + 6 = 24 + 6 = 30$$

**24. B**

Let total distance covered be 10d km

As per question ;

$$4d/20 + [(2d)/18] + 4d/36 = 19$$

$$\Rightarrow d/5 + d/9 + d/9 = 19$$

$$\Rightarrow (9d + 10d)/45 = 19$$

$$\Rightarrow d = 45$$

$$\text{Total distance} = 10d = 450 \text{ km}$$

$$\text{Required speed} = 450/15 = 30 \text{ kmph}$$

**25. A**

From statement 1;

$$15000 = 60000 \times x \times 2/100$$

$$\Rightarrow x = 12.5\%$$

Hence, only 1 is sufficient