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# Date Interpretation Info Chart Questions Quiz for IBPS PO Pre, SBI PO Pre, IBPS Clerk Mains, RRB Scale I Pre and SBI Clerk Mains Exams.

## DI Info Chart Quiz 16

**Directions:** Study the given information carefully to answer the questions.

TATA Motors (A Car manufacturing company) manufactured only two brands of cars A and B in the year 2016. In the year 2017, it introduced a new brand of car C. The number of cars of brands A and that of brand B manufactured in the year 2016 was in the ratio of 4: 5 respectively. The number of cars of brand A manufactured in the year 2016 to that in the year 2017 was in the ratio of 3: 2 and the number of cars of brand B manufactured in the year 2016 to that in the year 2017 was in the ratio of 3: 4. Further, the total number of cars manufactured in the year 2017 of brand C forms 30% of the total number of cars manufactured in the year 2017.

**1. In the year 2016, total 1800 cars of brand A was manufactured then find the total number of cars of brand C manufactured in the year 2017?**

- A. 2100      B. 1800      C. 2700      D. 2400      E. None of these

**2. What is the percentage increase in the total number of cars of all the brands manufactured in the year 2017 when compared to the total number of cars of both the brands manufactured in the year 2016? (approximately)**

- A. 45%      B. 52%      C. 48%      D. 56%      E. None of these

**3. In the next year i.e. in the year 2018, TATA Motors wants to increase its car manufacturing capacity by 25% compared to the previous year but it doesn't want to make any changes in the number of cars manufactured in the previous year of any brands therefore it introduced a new brand D. Suppose TATA Motors had manufactured total number of 900 cars of brand C in the year 2017, then in the year 2018 how many cars of brand D should it manufacture?**

- A. 825      B. 775      C. 725      D. 850      E. None of these

**4. If in the year 2017, total 7000 cars were manufactured but the total number of cars manufactured in the year 2017 of brand C forms only 4% instead of 30% then find total how many cars of brand A were manufactured in the years 2016 and 2017 together?**

- A. 5200      B. 4200      C. 4650      D. 4800      E. None of these

5. If in the year 2017, 900 cars of brand B was manufactured then find the sum of the total number of cars of all the brands manufactured in the year 2016 and 2017 together?

A. 2995

B. 3015

C. 3250

D. 2775

E. None of these

**Correct Answers:**

1	2	3	4	5
B	C	E	D	B

**Common Explanation :**

Let in the year 2016, The total number of cars of brand A manufactured =  $4x$  then the total number of cars of brand B manufactured in that year =  $5x$

Let in the year 2017, total number of cars manufactured of brand A =  $P$  and that of brand B =  $Q$  then according to the question

$$4x : P = 3 : 2$$

$$8x = 3P$$

$$P = \frac{8x}{3}$$

= total number of cars manufactured of brand A in the year 2017

For the brand B,

$$5x : Q = 3 : 4$$

$$20x = 3Q$$

$$Q = \frac{20x}{3}$$

= total number of cars manufactured of brand B in the year 2017

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## Answers :-

1. Following common explanation, we get

In the year 2016, The total number of cars of brand A manufactured =  $4x = 1800$

$$x = \frac{1800}{4} = 450$$

The total number of cars manufactured of brand A and B in the year 2017

$$= \frac{8x}{3} + \frac{20x}{3} = \frac{28x}{3} = \frac{28 \times 450}{3} = 4200$$

Let the total number of cars manufactured of brand C in the year 2017 =  $c$  then

$$c = 30\% \text{ of } (4200 + c)$$

$$100c = 30 \times 4200 + 30c$$

$$70c = 30 \times 4200$$

$$c = 30 \times 60 = 1800$$

Hence, option B is correct.

2. Following common explanation, we get

The total number of cars of all the brands manufactured in the year 2017

$$= \frac{8x}{3} + \frac{20x}{3} + c = \frac{28x}{3} + c$$

where  $c$  = total number of cars manufactured of brand C in the year 2017

$$c = 30\% \text{ of } \left( \frac{28x}{3} + c \right)$$

$$100c - 30c = 70c = 30 \times \frac{28x}{3}$$

$$c = \frac{12x}{3}$$

the total number of cars of all the brands manufactured in the year 2017

$$= \frac{8x}{3} + \frac{20x}{3} + c = \frac{28x}{3} + \frac{12x}{3} = \frac{40x}{3}$$

the total number of cars of all the brands manufactured in the year 2016 =  $4x + 5x = 9x$  the required percentage increase

$$= \frac{\left( \frac{40x}{3} - 9x \right)}{9x} \times 100 = \frac{13}{27} \times 100 = \frac{1300}{27} = 48.15\% \text{ approximately}$$

Hence, option C is correct.

3. Following common explanation, we get

The total number of cars of all the brands manufactured in the year 2017

$$= \frac{8x}{3} + \frac{20x}{3} + c = \frac{28x}{3} + c$$

where  $c$  = total number of cars manufactured of brand C in the year 2017

$$= 30\% \text{ of } \left( \frac{28x}{3} + c \right)$$

$$100c - 30c = 70c = 30 \times \frac{28x}{3}$$

$$c = \frac{12x}{3} = 900$$

$$x = \frac{900}{4} = 225$$

the total number of cars of all the brands manufactured in the year 2017

$$= \frac{8x}{3} + \frac{20x}{3} + c = \frac{28x}{3} + \frac{12x}{3} = \frac{40x}{3} = \frac{40 \times 225}{3} = 3000$$

In the next year i.e. in the year 2018, TATA Motors wants to increase its car manufacturing capacity by 25% compare to the previous year

Therefore, in the year 2018, the total number of cars it will manufacture = 125% of 3000 = 3750

It doesn't making changes in any brand therefore the total number of brand D cars it will manufacture = 3750 - 3000 = 750

Hence, option E is correct.

4. Following common explanation, we get

The total number of cars of brands C manufactured in the year 2017 = 4% of 7000 = 280

The total number of cars manufactured of brand A and B in the year 2017

$$= \frac{8x}{3} + \frac{20x}{3} = \frac{28x}{3} = 7000 - 280 = 6720$$

$$x = \frac{6720 \times 3}{28} = 240 \times 3 = 720$$

total cars of brand A manufactured in the years 2016 and 2017 together

$$= 4x + \frac{8x}{3} = \frac{20x}{3} = \frac{20 \times 720}{3} = 4800$$

Hence, option D is correct.

5. Following common explanation, we get

$\frac{20x}{3}$  = total number of cars manufactured of brand B in the year 2017

$$\frac{20x}{3} = 900$$

$$x = 45 \times 3 = 135$$

the total number of cars of all the brands manufactured in the year 2017

$$= \frac{8x}{3} + \frac{20x}{3} + c = \frac{28x}{3} + \frac{12x}{3} = \frac{40x}{3}$$

the total number of cars of all the brands manufactured in the year 2016 =  $4x + 5x = 9x$

$$\text{The reqd. sum} = 9x + \frac{40x}{3} = \frac{67x}{3} = 67 \times \frac{135}{3} = 45 \times 67 = 3015$$

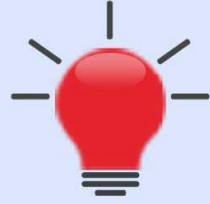
Hence, option B is correct.



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