

Slot A	Slot A	Slot B	Slot C	Slot D	Slot E	Average
Profit & Loss	4	3	3	1	5	3
Averages		4	2	2	7	3
Ratio & Proportion	3	3	3	2		2
Percentage		2	2		4	2
Mixtures & Allegations	1	2		2	1	1
Simple & Compound Interest	1		2		3	1
Ratios Partnerships			3	1		1
	<b>9</b>	<b>14</b>	<b>15</b>	<b>8</b>	<b>21</b>	<b>12</b>

Data Interpretation		7				1
Pie Chart			5			1
Bar Chart			5			1
Total		7	10			3

### 1. QUESTION

The average of ten numbers is 7. If each number is multiplied by 12, then the average of the new set of numbers is

- A]19
- B]82
- C]7
- D]84
- E]70

### 2. QUESTION

The average of 10 numbers is 40.2. Later it is found that two numbers have been wrongly copied. The first is 18 greater than the actual number and the second number added is 13 instead of 31. Find the correct average.

- A]40.2
- B]40.6
- C]40.4
- D]40.8
- E]40.5

### 3. QUESTION

**DIRECTION** for the question: Solve the following question and mark the best possible option.

A cricketer whose bowling average is 12.4 runs per wicket takes 5 wickets for 26 runs and thereby decreases his average by 0.4. The number of wickets taken by him till the last match was:

- A]72
- B]80
- C]64

D]88

E]85

## 4. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.

A and B rent a pasture for 10 months, A puts in 80 cows for 7 months. How many cows can B put for the remaining 3 months, if he pays half as much again as A?

A]180

B]200

C]120

D]280

E]300

## 5. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.

The owner of a boutique decides to calculate the percentage of customers who purchase hats. If 40 percent of the store's customers decide to purchase items, and of those customers 15 percent purchase hats, what percent of the store's customers purchase hats?

A]6%

B]15%

C]4%

D]24%

E]40%

## 6. QUESTION

One quality of wheat at Rs. 9.30 per kg is mixed with another quality at a certain rate in the ratio 8: 7. If the mixture so formed be worth Rs. 10 per kg, what is the rate per kg of the second quality of wheat?

A]10.60

B]10.80

C]10.30

D]11

E]11.30

## 7. QUESTION

If one star equals four circles and three circles equal four diamonds, then what is the ratio of star to diamond?

A]3:4

B]3:16

C]1:3

D]16:3

E]1:5

## 8. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.

A man sells an article at a gain of 15%. If he had bought it at 10% less and sold it for Rs 4 less, he would have gained 25%. Find the cost price of the article

A]RS160

B]RS170

C]RS150

D]RS180

E]RS190

## 9. QUESTION

Visitors to a show were charged Rs. 15 each on the first day, Rs 7.50 on the second day and Rs. 2.50 each on the third day. The attendance on the three days was in the ratio 2: 5:13. The average charge per person for the whole show was

A]RS6.63

B]RS7.50

C]RS5

D]RS9

E]RS2.5

## 10. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.

In a mixture of 45 litres, the ratio of milk and water is 4: 1. How much water must be added to make the mixture ratio 3:2

A]24L

B]15L

C]72L

D]1.5L

E]33L

## 11. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.

A person bought 20 litres of milk at the rate of Rs. 8 per litre. He got it churned after spending Rs. 10 and 5 kg of cream and 20 litres of toned milk were obtained. If he sold the cream at Rs. 30 per kg and toned milk at Rs 4 per litre, his profit in the transaction is

A]35.3%

B]37.5%

C]25%

D]42.5%  
E]50%

## 12. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.

Zinc and copper are melted together in the ratio 9: 1. What is the weight of melted mixture, if 28.8 kg of zinc has been consumed in it?

A]60KG  
B]64KG  
C]58KG  
D]70KG  
E]72KG

## 13. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.

A shopkeeper offers 15% discount on all plastic toys. He offers a further discount of 4% on the reduced price to those customers who pay cash. What does a customer have to pay (in Rs.) in case for a toy of Rs 200?

A]129.8  
B]163.2  
C]133.7  
D]153.3  
E]145.2

## 14. QUESTION

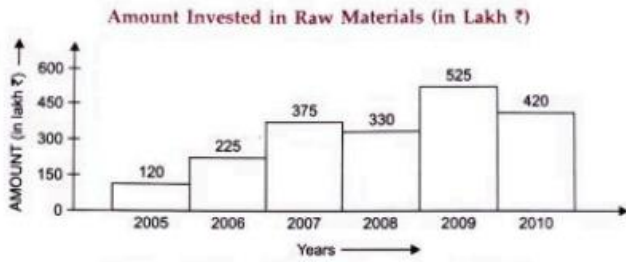
DIRECTION for the question: Solve the following question and mark the best possible option.

A candidate has to obtain minimum 33% of the total marks to pass. He got 25% of the total marks and failed by 40 marks. The maximum marks are

A]400  
B]500  
C]600  
D]300  
E]800

## 15. QUESTION

DIRECTIONS for Questions: In the following bar graphs given below, one shows the amount (in lakh Rs.) invested by a company in purchasing raw materials over the years and the other shows the value (in lakh Rs.) of finished goods sold by the company over the years. Study the bar graphs and answer the questions based on them



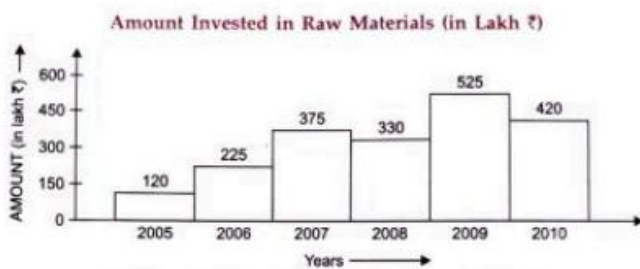
The value of sales of finished goods in 2009 was approximately what percent of the average amount invested in raw materials in the years 2007, 2008 and 2009?

- A]37%
- B]45%
- C]33%
- D]49%
- E]53%



## 16. QUESTION

**DIRECTIONS for Questions:** In the following bar graphs given below, one shows the amount (in lakh Rs.) invested by a company in purchasing raw materials over the years and the other shows the value (in lakh Rs.) of finished goods sold by the company over the years. Study the bar graphs and answer the questions based on them



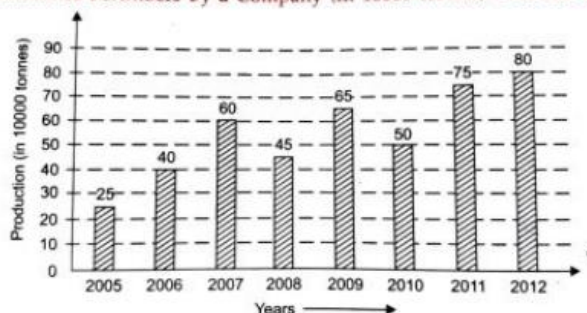
In which year, the percentage change (compared to previous year) in the investment on raw materials is the same as that in the value of sales of finished goods?

- A]2007
- B]2008
- C]2006
- D]2009
- E]2010

## 17. QUESTION

DIRECTIONS for Questions: Study the following bar graph answer the questions given below:

Production of Fertilizers by a Company (in 10000 tonnes) Over the Years



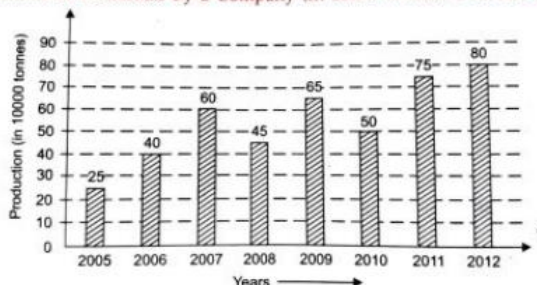
In how many of the given years was the production of fertilizers more than the average production of the given years

- A]2
- B]3
- C]1
- D]4
- E]5

## 18. QUESTION

DIRECTIONS for Questions: Study the following bar graph answer the questions given below:

Production of Fertilizers by a Company (in 10000 tonnes) Over the Years



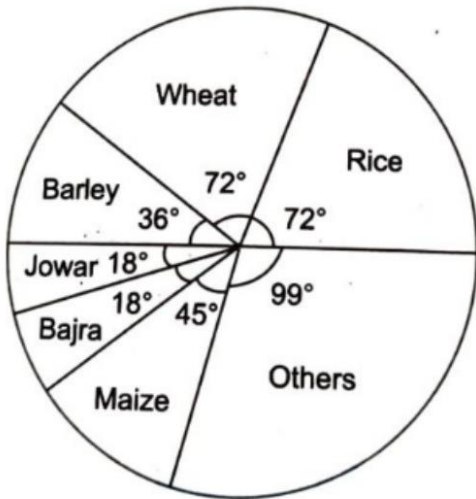
average production of 2006 and 2007 was exactly equal to the average production of which of the following pairs of years

- A]2009AND2010
- B]2008AND2010

C]2010AND2011  
 D]2005AND2009  
 E]2005AND2011

DIRECTIONS for Questions: The pie chart shown below gives the distribution of land in a village under various food crops. Study the pie-chart carefully and answer the questions that follow:

Distribution of areas (in acres) under various food crops



19. If the production of wheat is 6 times that of barley, then what is the ratio between the yield per acre of wheat and barley?
- 3:2
  - 4:3
  - 5:2
  - 1:2
  - 3:1
20. If the total area is given as 3240 acres what is the value of Others ?
- 891
  - 998
  - 1020
  - 1000
  - 1500

## Solutions

### 1. SOLUTION[D] 84

Given that average of ten numbers is 7

let the numbers be  $a_1, a_2, \dots, a_{10}$  Therefore,  $7 = a_1 + a_2 + \dots + a_{10} / 10$

Rightarrow  $a_1 + a_2 + \dots + a_{10} = 70$ -----

Given that, each number is multiplied by 12.

Therefore, the new set is  $12a_1, 12a_2, \dots, 12a_{10}$

The average of new set is  $(12a_1 + 12a_2 + \dots + 12a_{10}) / 10 = 12(a_1 + a_2 + \dots + a_{10}) / 10 = (12 * 70) / 10 = 84$

### 2. SOLUTION[A] 40.2

Sum of 10 numbers =  $10 * 40.2 = 402$

1st number added is 18 more than actual number, So, 18 must be subtracted Also, 2nd number added is 13 instead of 31, So, 13 should be subtracted and 31 should be added

=> Actual sum of 10 numbers =  $402 - 18 - 13 + 31 = 402$

=> Actual average =  $402 / 10 = 40.2$

### 3. SOLUTION[E] 85

Let the number of wickets taken by bowler after the match be N.

So, number of runs given by bowler after match =  $(N - 5) \times 12.4 + 26$

$$= 12.4N - 62 + 26$$

$$= 12.4N - 36$$

$$\text{Average of bowler after match} = \frac{12.4N - 36}{N}$$

As per question, average of bowler after match =  $12.4 - 0.4 = 12$

Equating both averages, we get

$$\frac{12.4N - 36}{N} = 12$$

$$12.4N - 12N = 36$$

$$N = \frac{36}{0.4}$$

$$N = 90$$

So, Number of wickets taken by bowler till last match =  $N - 5 = 90 - 5 = 85$

### 4. SOLUTION[D] 280

$$\frac{A}{B} = \frac{2}{3} \cdot \frac{2}{3} = \frac{7 \cdot 80}{3 \cdot x} \Rightarrow x = 280$$

### 5. SOLUTION[A] 6%

To solve this problem, we'll use the information given:

1. 40% of the store's customers decide to purchase items.

2. Among those customers who decide to purchase items, 15% purchase hats.

We need to find out what percentage of the store's customers purchase hats.

Let's solve it step by step:

1. Calculate the percentage of customers who purchase items and hats:

Percentage of customers purchasing items = 40%

Percentage of those customers purchasing hats = 15% of 40% =  $(15/100) * 40\% = 6\%$

So, 6% of the store's customers purchase hats.

Thus, the correct answer is:

: 6% \*\*



6. SOLUTION[B] 10.80

Let the rate of 2nd quality of wheat is Rs 'x' per Kg.  
Total weight of mixture is 15 Kg (since the ratio is 8: 7).

According to the question mixture rate will be,

$$\{(9.3 * 8) + 7x\} / 15 = 10$$

$$74.4 + 7x = 150$$

$$7x = 75.6$$

$$x = 10.8$$

The rate of second quality of wheat will be Rs 10.8 per Kg.

Hence, the correct answer is "10.8".

7. SOLUTION[D] 16:3

Given one star(S) equals four circles(C) and three circles equal four diamonds (D). Then,  $S = 4C$  and  $3C = 4D$

$$\text{Then, } C = 4/3 * D$$

$$S = 4 * 4/3 * D$$

$$S = 16/3 * D$$

$$\text{Hence, } S / D = 16/3$$

8. SOLUTION[A] 160

Originally:  $CP = X$  and  $SP = 1.15X$

2nd instance

$$CP=0.90X \quad SP = 1.15X - 4 \quad \text{Profit}=25\%$$

The equation;

$$1.25(0.9X) = 1.15X - 4$$

$$\Rightarrow 1.125X = 1.15X - 4$$

$$\Rightarrow 0.025X = 4 \text{ hence } X = 160/-..$$

Therefore Cost Price of the article was 160/-.

9. SOLUTION[C] 5

The correct option is B Rs. 5

Let attendance on first, second and third day be 2, 5 and 13, respectively.

$$\text{Total number of visitors for three days} = 2 + 5 + 13 = 20$$

Total amount of money collected

$$= 2 * 15 + 5 * 7.5 + 13 * 2.5$$

$$= 30 + 37.5 + 32.5 = 100$$

$$\text{Average charge per person} = 100/20 = 5$$

10. SOLUTION[B] 15

Quantity of milk in 45 litres of mixture  $4/5 \times 45$  litres = 36 litres

-. Quantity of water in the mixture = 9 litres

Let x litres of water be added to the mixture.

$$\text{Then, } 36/9 + X = 3/2. \Rightarrow 72 = 27 + 3x \Rightarrow 3x = 45 \quad x = 15 \text{ litres.}$$

11. SOLUTION[A] 35.3%

$$P\% = \frac{SP - CP}{CP} * 100 = \frac{230 - 170}{170} * 100 = 35.3\%$$

12. SOLUTION[B] 64KG

9 kg zinc, mixture melted =  $(9 + 11) * \text{kg}$  .

13. .SOLUTION[B] 163.2

MP of the toy = Rs. 200

SP of the toy after getting two discount of 15% and 4% =  $200 \times (85/100) \times (96/100) = \text{Rs } 163.2$

14. .SOLUTION[B]500

33% of X =  $125 + 40$

$33X = 165 * 100$

$X = 16500/33$

$x = 500$

15. .SOLUTION[D] 49%

16. .SOLUTION[A] 2007

17. SOLUTION[D] 4

18. .SOLUTION[E] 2005 AND 2011

19. Solution C

If  $18 = 1.5$

$72 = X$

(Cross multiply )

$72 \times 1.5/18 = X$

$X = 6$

146.

Solution :- E

$W = 6B$

But

$W = 72$

$B = 36$

Therefore it will be 3:1

20. Solution = 891

$T = 3240$

$3240/360 = 9$

Others = 99 so  $99 \times 9 = 891$

