

## BPSC AEDO Practice Set Paper-1 General Aptitude

**Q.1** A reduction of 20% in the price of wheat enables a housewife to obtain 4 kgs more for ₹ 1200, what is the reduced price per kg (in ₹)?

- A. 40
- B. 60
- C. 75
- D. 50

**Answer:** B

**Sol: Given:**

Reduction in price = 20%

Amount spent = ₹1200

**Solution:**

Extra quantity obtained = 4 kg

Let the original price be ₹x per kg.

Reduced price = 80% of x = 0.8x

Extra quantity

$$\frac{1200}{0.8x} - \frac{1200}{x} = 4$$

$$\Rightarrow \frac{1500}{x} - \frac{1200}{x} = 4$$

$$\Rightarrow \frac{1500 - 1200}{x} = 4$$

$$\Rightarrow \frac{300}{x} = 4$$

$$\Rightarrow x = \frac{300}{4} = 75$$

Original price = ₹75 per kg

Reduced price =  $0.8 \times 75 = ₹60$  per kg

Reduced price per kg = ₹60

**Q.2** Newton bought an old bike for Rs. 2000 and repaired it by spending Rs. 500. For how much must he sell the bike to earn a profit of 30 percent?

- A. Rs. 3250
- B. Rs. 3000
- C. Rs. 4200
- D. Rs. 4500

**Answer:** A

**Sol: Given:**

Cost price of the bike = Rs 2000

Repair cost = Rs 500

Desired profit = 30%

**Formula Used:**

$$SP = CP \times \left(1 + \frac{\text{Profit \%}}{100}\right)$$

**Solution:**

Total Cost Price (TCP) = 2000 + 500 = 2500

Selling Price (SP) to earn 30% profit:

$$SP = 2500 \times \left(1 + \frac{30}{100}\right) = 2500 \times 1.30 = 3250$$

Thus, Newton must sell the bike for Rs 3250 to earn a profit of 30%

**Q.3** Suman bought 30 kg flour at Rs. 1200. He decided to sell the flour at Rs 52 per kg. What is the percentage of profit he will earn?

- A. 25
- B. 32
- C. 28
- D. 30

**Answer:** D

**Sol: Given:**

Suman bought 30 kg of flour for Rs 1200.

He decided to sell the flour at Rs 52 per kg.

**Formula Used:**

$$\text{Percentage Profit} = \frac{\text{Profit}}{\text{Cost Price}} \times 100$$

Where:

Profit = Selling Price - Cost Price

**Solution:**

CP of 30 kg = 1200

The selling price per kg is Rs 52, so the total selling price for 30 kg is:

SP = 30 × 52 = 1560

Profit = 1560 - 1200 = 360

$$\text{Percentage Profit} = \frac{360}{1200} \times 100 = 30\%$$

Thus, The percentage of profit Suman will earn is 30%

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**Q.4** On selling two items each at Rs 1250, the trader makes an overall profit of 25 percent. If the cost price of one item was Rs. 900, what was the cost price of the other?

- A. Rs. 1100
- B. Rs. 1250
- C. Rs. 1000
- D. Rs. 1200

**Answer:** A

**Sol: Given:**

Selling price of each item = Rs 1250

Overall profit = 25%

Cost price of one item = Rs 900

We need to find the cost price of the other item.

**Formula Used:**

$$SP = CP \times \left(1 + \frac{\text{Profit \%}}{100}\right)$$

**Solution:**

Total SP = 1250 + 1250 = Rs. 2500

$$\text{Total CP} = \frac{2500}{1 + \frac{25}{100}} = \frac{2500}{1.25} = \text{Rs. } 2000$$

Cost Price of Item 2 = 2000 - 900 = Rs. 1100

Thus, The cost price of the other item is Rs 1100

**Q.5** The average marks of five boys in class was 80. But later it was found that one of the boys marks which was 90 was wrongly written as 60. What is the correct average?

- A. 86
- B. 80
- C. 85
- D. 90

**Answer:** A

**Sol: Given:**

Number of boys (n) = 5

Initial average marks (m) = 80

Correct mark (a) = 90

Wrongly written mark (b) = 60

**Concept Used:**

When a number is misread, the correct average using the formula:

$$\text{Correct Average} = m + \frac{a - b}{n}$$

Where:

m is the initial average

a is the correct mark

b is the wrongly written mark

n is the number of boys

**Solution:**

Substitute the given values into the formula:

$$\text{Correct Average} = 80 + \frac{90 - 60}{5}$$

$$= 80 + \frac{30}{5}$$

$$= 80 + 6 = 86$$

Thus, the correct average marks of the five boys is 86

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**Q.6** A, B, C and D receive Rs. 100, Rs. 150, Rs. 80 and Rs. 70 respectively as lunch money everyday. What is the average lunch money that they get?

- A. Rs. 120
- B. Rs. 86
- C. Rs. 70
- D. Rs. 100

**Answer:** D

**Sol: Given:**

A receives Rs 100, B receives Rs 150

C receives Rs 80, D receives Rs 70

**Formula Used:**

$$\text{Average} = \frac{\text{Sum of all amounts}}{\text{Number of people}}$$

**Solution:**

$$\text{Average lunch money} = \frac{100 + 150 + 80 + 70}{4}$$

$$= \frac{400}{4} = 100$$

The average lunch money that they get is Rs 100

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**Q.7** The average weight of Chetan, Vipul and Mohan is 46 kg. If the average weight of Chetan and Vipul be 40 kg and that of Vipul and Mohan be 44 kg, then the weight of Vipul (in kg) is:

- A. 40
- B. 30
- C. 50
- D. 45

**Answer:** B

**Sol: Given:**

Average weight of Chetan, Vipul, Mohan = 46 kg

Average weight of Chetan & Vipul = 40 kg

Average weight of Vipul & Mohan = 44 kg

**Formula Used:**

Sum = Average  $\times$  Number of persons

**Solution:**

Let the weights be:

Chetan = C, Vipul = V, Mohan = M

Now,

$$C + V + M = 46 \times 3 = 138 \dots(1)$$

$$C + V = 40 \times 2 = 80 \dots\dots(2)$$

$$V + M = 44 \times 2 = 88 \dots\dots(3)$$

Doing (2) + (3) - (1):

$$(C + V + V + M) - (C + V + M) = (80 + 88) - (138)$$

$$V = 168 - 138$$

$$V = 30$$

Thus, Weight of Vipul is 30 kg

**Q.8** The average of 38 numbers is 51. The average of the first 24 numbers is 45, and that of the last 5 numbers is 60. What is the average of the remaining numbers?

- A. 59
- B. 60
- C. 62
- D. 61

**Answer:** C

**Sol: Given:**

Average of 38 numbers = 51

Average of first 24 numbers = 45

Average of last 5 numbers = 60

**Formula Used:**

$$\text{Average} = \frac{(\text{Sum of observations})}{(\text{Number of observations})}$$

**Solution:**

Total sum of 38 numbers =  $38 \times 51 = 1938$

$$\text{Sum of first 24 numbers} = 24 \times 45 = 1080$$

$$\text{Sum of last 5 numbers} = 5 \times 60 = 300$$

$$\text{Sum of remaining numbers} = 1938 - (1080 + 300) = 1938 - 1380 = 558$$

$$\text{Number of remaining numbers} = 38 - (24 + 5) = 9$$

$$\text{Average of remaining} = \frac{558}{9} = 62$$

**Q.9** A father distributed Rs. 15000 among his sons A and B in the ratio 2 : 3. But B gave away 20 percent of his share to his younger sister. What is the amount that is left with B now?

- A. Rs. 7200
- B. Rs. 3600
- C. Rs. 8000
- D. Rs. 9600

**Answer:** A

**Sol: Given:**

The total amount to be distributed = Rs 15000

The ratio of distribution between A and B = 2 : 3

B gave away 20% of his share to his younger sister.

**Solution:**

Amount received by A and B based on the ratio:

The total ratio parts = 2 + 3 = 5

Amount received by B:

$$\text{B's share} = \frac{3}{5} \times 15000 = 9000$$

Amount given away = 20% of B's share

$$= 0.20 \times 9000 = 1800$$

$$\text{Amount left with B} = 9000 - 1800 = 7200$$

Thus, The amount that is left with B is Rs 7200

**Q.10** What must be added to  $\frac{17}{21}$  to make it equal to the ratio to 38 : 21?

- A. 1.2
- B. 2
- C. 1
- D. 3

**Answer:** C

**Sol: Given:**

The fraction  $\frac{17}{21}$  and the ratio 38 : 21

**Solution:**

$$\begin{aligned}\text{Required number} &= \frac{38}{21} - \frac{17}{21} \\ &= \frac{38}{21} - \frac{17}{21} \\ &= \frac{38 - 17}{21} \\ &= \frac{21}{21} = 1\end{aligned}$$

Thus, 1 must be added to  $\frac{17}{21}$  to make it equal to the ratio 38 : 21

**Q.11** The third proportional to 0.13 and 0.52 is:

- A. 1.45
- B. 3.12
- C. 2.65
- D. 2.08

**Answer:** D

**Sol: Given:**

First term (a) = 0.13

Second term (b) = 0.52

**Concept Used:**

In third proportion, if

$$\frac{a}{b} = \frac{b}{c} \Rightarrow c = \frac{b^2}{a}$$

**Solution:**

$$c = \frac{(0.52)^2}{0.13} = \frac{0.2704}{0.13} = 2.08$$

**Q.12** P and Q have amounts in the ratio of 5:3. If P gives Rs.10 to Q, then the ratio of amounts becomes 1:1. What amount did they have respectively initially?

- A. Rs 5, Rs 3
- B. Rs 15, Rs 9
- C. Rs 30, Rs 18
- D. Rs 50, Rs 30

**Answer:** D

**Sol: Given:**

Initial ratio of amounts of P and Q = 5 : 3

P gives Rs. 10 to Q

New ratio becomes 1 : 1

We are to find the initial amounts of P and Q.

**Solution:**

Let P's initial amount =  $5x$

Let Q's initial amount =  $3x$

After P gives Rs.10 to Q:

P has =  $5x - 10$

Q has =  $3x + 10$

Now,

$$5x - 10 = 3x + 10$$

$$5x - 3x = 10 + 10$$

$$2x = 20$$

$$x = 10$$

So,

P's initial amount =  $5x = \text{Rs. } 50$

Q's initial amount =  $3x = \text{Rs. } 30$

**Q.13** Number A is eight times as large as number B. By what percentage is number B less than number A?

- A. 87.5%
- B. 20%
- C. 80%
- D. 12.5%

**Answer:** A

**Sol: Given:**

$$A = 8 \times B$$

**Concept Used:**

$$\text{Percentage decrease} = \left[ \frac{(\text{Difference})}{(\text{Original Value})} \right] \times 100$$

**Solution:**

Let the value of B =  $x$

Then, A =  $8x$

$$\text{Difference} = A - B = 8x - x = 7x$$

$$\text{Percentage by which B is less than A} = \left( \frac{7x}{8x} \right) \times 100$$

$$\text{Percentage} = \left( \frac{7}{8} \right) \times 100 = 87.50\%$$

**Q.14** Arun had some money with which he could buy either fifteen chocolates or five notebooks. He decided to put away 12 percent of it for himself. What is the maximum number of notebooks that he can buy with the remaining amount?

- A. 4
- B. 3
- C. 5
- D. 6

**Answer:** A

**Sol: Given:**

Arun has an amount of money

With that money, Arun could buy 15 chocolates.

With that money, Arun could buy 5 notebooks.

Arun decided to put away 12 percent of his money for himself.

**Solution:**

Let the Arun has Rs. 60

Remaining amount of money after setting aside 12%:

Remaining Amount =  $0.88 \times 60 = \text{Rs. } 52.8$

Cost of 1 notebook =  $\frac{60}{5} = \text{Rs. } 12$

Number of notebooks =  $\frac{52.8}{12} = 4.4$

Since Arun cannot buy a fraction of a notebook, the maximum number of notebooks he can buy is 4.

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**Q.15** In a company, 25 employees were laid off in April and another 300 in the next month. If initially there were total 1000 employees, then what percent of the employees were laid off?

- A. 35
- B. 32.5
- C. 45
- D. 30

**Answer:** B

**Sol: Given:**

Initial number of employees = 1000

Employees laid off in April = 25

Employees laid off in May = 300

**Solution:**

Total employees laid off:

Total employees laid off =  $25 + 300 = 325$

Percentage of employees laid off =  $\frac{325}{1000} \times 100 = 32.5\%$

Thus, The percentage of employees laid off is 32.5%

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**Q.16** A store offers two successive discounts of 12% and 18% on an item. What is the equivalent single discount that a customer would receive if these two discounts were applied together?

- A. 26.46%
- B. 27.84%
- C. 30%
- D. 28.64%

**Answer:** B

**Sol: Given:**

Two successive discounts = 12% and 18%

**Formula Used:**

$$\text{Single Discount \%} = A + B - \frac{A \times B}{100}$$

Where A and B are the two successive discounts.

**Solution:**

$$\text{Single Discount} = 12 + 18 - \frac{12 \times 18}{100}$$

$$= 30 - \frac{216}{100}$$

$$= 30 - 2.16$$

$$= 27.84\%$$

Thus, The equivalent single discount is 27.84%

**Q.17** What is the HCF of 875, 245 and 1225 ?

- A. 105
- B. 5
- C. 7
- D. 35

**Answer:** D

**Sol: Given:**

Numbers: 875, 245, 1225

**Solution :**

Prime factorization of 875

$$875 = 5 \times 175 = 5 \times 5 \times 35 = 5^3 \times 7$$

Prime factorization of 245

$$245 = 5 \times 49 = 5 \times 7^2$$

Prime factorization of 1225

$$1225 = 35 \times 35 = (5 \times 7)^2 = 5^2 \times 7^2$$

$$\text{HCF} = 5 \times 7 = 35$$

**Q.18** Simplify the following expression.

$$0.\overline{12} - 0.\overline{6} + 0.\overline{3}$$

- A.  $\frac{9}{100}$
- B.  $\frac{37}{33}$
- C.  $-\frac{5}{11}$
- D.  $-\frac{7}{33}$

**Answer:** D

**Sol: Given:**

$$0.\overline{12} - 0.\overline{6} + 0.\overline{3}$$

**Concept Used:**

$$0.ab\overline{c} = \frac{abc - ab}{900}$$

$$0.\overline{12} - 0.\overline{6} + 0.\overline{3}$$

$$= \frac{12}{99} - \frac{6}{9} + \frac{3}{9}$$

$$= \frac{12 - 66 + 33}{99}$$

$$= \frac{-21}{99}$$

$$= \frac{-7}{33}$$



**Q.19** The LCM of 16/25 and 5/18 is how many times its HCF?

- A. 36000
- B. 6000
- C. 60
- D. 44

**Answer:** A

**Sol: Given:**

Two fractions:  $\frac{16}{25}$  and  $\frac{5}{18}$

**Formula Used:**

$$\text{LCM} = \frac{\text{LCM of numerators}}{\text{HCF of denominators}}$$

$$\text{HCF} = \frac{\text{HCF of numerators}}{\text{LCM of denominators}}$$

**Solution:**

$$\text{LCM} = \frac{\text{LCM}(16, 5)}{\text{HCF}(25, 18)} = \frac{80}{1} = 80$$

$$\text{HCF} = \frac{\text{HCF}(16, 5)}{\text{LCM}(25, 18)} = \frac{1}{450}$$

$$\text{Required ratio} = \frac{\text{LCM}}{\text{HCF}} = \frac{80}{\frac{1}{450}} = 80 \times 450 = 36,000$$

Thus, the ratio of the LCM of the fractions to the HCF of the fractions is 36,000 times

**Q.20** There are two numbers whose sum is 230. If the numbers are in the ratio 3 : 7, then find the their LCM?

- A. 161
- B. 483
- C. 1449
- D. 263

**Answer:** B

**Sol: Given:**

The sum of two numbers is 230.

The ratio of the two numbers is 3 : 7.

**Solution:**

Let the two numbers be 3x and 7x

So,

$$3x + 7x = 230$$

$$10x = 230$$

$$x = \frac{230}{10} = 23$$

The two numbers are:

$$3x = 3 \times 23 = 69$$

$$7x = 7 \times 23 = 161$$

Prime factorization;

$$69 = 3 \times 23, 161 = 7 \times 23$$

$$\text{LCM}(69, 161) = 3 \times 7 \times 23 = 483$$

Thus, The LCM of the two numbers is 483

**Q.21** Find the value of  $\left[ \left( \frac{60}{5} \right) \times \left\{ \frac{56}{4} + \frac{14}{3} \times (9 - 6) \right\} \right]$

- A. 347
- B. 336
- C. 349
- D. 325

**Answer:** B

**Sol: Given:**

$$\left[ \left( \frac{60}{5} \right) \times \left\{ \frac{56}{4} + \frac{14}{3} \times (9 - 6) \right\} \right]$$

**Concept Used:**

**Operation preference wise      Symbol**

Brackets                      [], {}, ()

Orders, of                    <sup>x</sup> (power), <sup>√</sup> (root), of

Division                      ÷

Multiplication              ×

Addition                    +

Subtraction                  -

**Solution:**

$$\left[ \left( \frac{60}{5} \right) \times \left\{ \frac{56}{4} + \frac{14}{3} \times (9 - 6) \right\} \right]$$

$$= \left[ \left( \frac{60}{5} \right) \times \left\{ \frac{56}{4} + \frac{14}{3} \times (3) \right\} \right]$$

$$= \left[ \left( \frac{60}{5} \right) \times \{14 + 14\} \right]$$

$$= \left[ \left( \frac{60}{5} \right) \times \{28\} \right]$$

$$= \left[ (12) \times \{28\} \right]$$

$$= 336$$

**Q.22** Evaluate:  $16 + 10 \div 5 - 3 \times 3$

- A. 8
- B. 9
- C. 11
- D. 12

**Answer:** B

**Sol: Given:**

$$16 + 10 \div 5 - 3 \times 3$$

**Concept Used:**

**Operation preference wise      Symbol**

Brackets       $[], \{\}, ()$

Orders, of       $^x$  (power),  $\sqrt{\quad}$  (root), of

Division       $\div$

Multiplication       $\times$

Addition       $+$

Subtraction       $-$

**Solution:**

$$16 + 10 \div 5 - 3 \times 3$$

$$= 16 + 2 - 3 \times 3$$

$$= 16 + 2 - 9$$

$$= 18 - 9$$

$$= 9$$

**Q.23** Evaluate:  $(-9) - (-60) \div (-12) + (-3) \times 8$

- A. -38
- B. -37
- C. -41
- D. -40

**Answer:** A

**Sol: Given:**

$$(-9) - (-60) \div (-12) + (-3) \times 8$$

**Concept Used:**

**Operation preference wise      Symbol**

Brackets                      [], {}, ()

Orders, of                    <sup>x</sup> (power),  $\sqrt{\quad}$  (root), of

Division                       $\div$

Multiplication               $\times$

Addition                     $+$

Subtraction                  $-$

**Solution:**

$$(-9) - (-60) \div (-12) + (-3) \times 8$$

$$= (-9) - 5 + (-3) \times 8$$

$$= (-9) - 5 + (-24)$$

$$= (-14) + (-24)$$

$$= -38$$



**Q.24** The value of  $\frac{3}{4} \times 2\frac{2}{3} \div \frac{5}{9}$  of  $1\frac{1}{5} - \frac{3}{5}$  of  $\left(\frac{2}{3} \div \frac{2}{3}$  of  $\frac{3}{2}\right) + \frac{4}{5} \times 1\frac{1}{9} \div \frac{8}{15} - \frac{2}{3}$  is:

- A.  $1\frac{3}{10}$
- B.  $3\frac{3}{5}$
- C.  $3\frac{10}{9}$
- D.  $4\frac{2}{5}$

**Answer:** B

**Sol: Given:**

$$\frac{3}{4} \times 2\frac{2}{3} \div \frac{5}{9} \text{ of } 1\frac{1}{5} - \frac{3}{5} \text{ of } \left(\frac{2}{3} \div \frac{2}{3} \text{ of } \frac{3}{2}\right) + \frac{4}{5} \times 1\frac{1}{9} \div \frac{8}{15} - \frac{2}{3}$$

**Solution:**

$$\frac{3}{4} \times \frac{8}{3} \div \frac{5}{9} \text{ of } \frac{6}{5} - \frac{3}{5} \text{ of } \left(\frac{2}{3} \div 1\right) + \frac{4}{5} \times \frac{10}{9} \div \frac{8}{15} - \frac{2}{3}$$

$$= \frac{3}{4} \times \frac{8}{3} \div \frac{2}{3} - \frac{2}{5} + \frac{4}{5} \times \frac{10}{9} \div \frac{8}{15} - \frac{2}{3}$$

$$\begin{aligned}
 &= \frac{3}{4} \times \frac{8}{3} \times \frac{3}{2} - \frac{2}{5} + \frac{4}{5} \times \frac{10}{9} \times \frac{15}{8} - \frac{2}{3} \\
 &= 3 - \frac{2}{5} + \frac{5}{3} - \frac{2}{3} \\
 &= 3 - \frac{2}{5} + \frac{3}{3} \\
 &= 3 - \frac{2}{5} + 1 \\
 &= \frac{15 - 2 + 5}{5} = \frac{18}{5} = 3\frac{3}{5}
 \end{aligned}$$

**Q.25** On compound interest, a certain sum becomes ₹ 19,360 after 2 years and ₹ 21,296 after 3 years. Find the simple interest on the same sum at the same rate of interest for 3 years.

- A. ₹ 4,760
- B. ₹ 4,675
- C. ₹ 4,725
- D. ₹ 4,800

**Answer:** D

**Sol: Given:**

Compound amount after 2 years = ₹19,360

Compound amount after 3 years = ₹21,296

Find compound interest for the 3rd year:

CI for 3rd year = ₹21,296 - ₹19,360 = ₹1,936

Calculate the rate of interest:

CI for 3rd year = ₹1,936

Amount after 2 years = ₹19,360

**Solution:**

Using the formula:

Rate (R) = (CI for 3rd year / Amount after 2 years) × 100

= (1936 / 19360) × 100

= 10%

The principal using compound interest formula:

$$A = P \left(1 + \frac{R}{100}\right)^2$$

$$\Rightarrow 19360 = P \left(1 + \frac{10}{100}\right)^2$$

$$\Rightarrow 19360 = P \times (1.1)^2$$

$$\Rightarrow 19360 = P \times 1.21$$

$$\Rightarrow P = \frac{19360}{1.21}$$

$$\Rightarrow P = ₹16,000$$

Simple Interest for 3 years on ₹16,000 at 10% rate:

$$= \frac{P \times R \times T}{100}$$

$$= \frac{16000 \times 10 \times 3}{100}$$

$$= ₹4,800$$

The simple interest on the same sum for 3 years is ₹4,800.

**Q.26** The compound interest on a sum of ₹ 1,250 for two years is ₹ 102 when interest is compounded annually at a certain rate per cent p.a. What is the rate of interest per annum?

- A. 3.5%
- B. 4.08%
- C. 4%
- D. 3.9%

**Answer:** C

**Sol: Given:**

- Principal (P) = ₹1,250
- Compound Interest (CI) = ₹102
- Time = 2 years
- Interest compounded annually

**Formula Used:**

Compound Interest:

$$A = P \times \left(1 + \frac{R}{100}\right)^T$$

**Solution:**

Total amount = ₹1250 + ₹102 = ₹1352

Let A = Amount and P = Principal

$$\left(1 + \frac{R}{100}\right)^2 = \frac{A}{P} = \frac{676}{625}$$

$$1 + \frac{R}{100} = \frac{26}{25}$$

$$\frac{100 + R}{100} = \frac{26}{25}$$

$$100 + R = 104$$

$$R = 4\%$$

The rate of interest per annum is 4.0%.

**Q.27** Meena took a loan of Rs 8000 at 20 percent per annum compound interest compounded semi annually. She repaid the loan after two years. Had she repaid the loan after a year, how much money she could have saved?

- A. Rs. 3505.5
- B. Rs. 2300.2
- C. Rs. 2800.8
- D. Rs. 2032.8

**Answer:** D

**Sol: Given:**

Principal P = 8000

Rate of interest R = 20% per annum

Time T = 2 years

Interest is compounded semi-annually, so the rate per half-year =  $\frac{20}{2} = 10\%$

**Formula Used:**

The formula for compound interest when compounded semi-annually is:

$$A = P \left(1 + \frac{R}{100n}\right)^{nt}$$

Where:

A is the amount after t years, P is the principal, R is the annual interest rate

n is the number of times the interest is compounded per year

**Solution:**

Amount after 2 years:

$$\begin{aligned} &= 8000 \left(1 + \frac{20}{100 \times 2}\right)^{2 \times 2} \\ &= 8000 \left(1 + \frac{10}{100}\right)^4 \\ &= 8000 (1.1)^4 \\ &= 8000 \times 1.4641 \\ &= 11712.8 \end{aligned}$$

Amount after 1 year:

$$\begin{aligned} &= 8000 \left(1 + \frac{20}{100 \times 2}\right)^{2 \times 1} \\ &= 8000 (1.1)^2 \\ &= 8000 \times 1.21 \\ &= 9680 \end{aligned}$$

Amount saved = 11712.8 - 9680 = Rs. 2032.8

Thus, Meena could have saved Rs 2032.8 by repaying the loan after 1 year instead of 2 years

**Q.28** Sam lent a sum of money at simple interest which amounted to Rs. 9800 in four years and the interest that he earned was Rs. 2800. Had he lent it at compound interest compounded annually for the same time and at same rate, what would be the amount at the end of four years?

- A. Rs. 10500.6
- B. Rs. 10248.7
- C. Rs. 12000.9
- D. Rs. 10000.5

**Answer:** B

**Sol: Given:**

Amount after 4 years at simple interest = Rs. 9800

Interest earned = Rs. 2800

Time T = 4 years

From the given data, we can calculate the principal using the formula for simple interest.

**Formula Used:**

Simple interest formula:

$$SI = \frac{P \times R \times T}{100}$$

Compound interest formula:

$$A = P \left( 1 + \frac{R}{100} \right)^T$$

CI = Amount - Principal

**Solution:**

For Simple Interest

$$\text{Amount} = \text{SI} + P$$

$$9800 = 2800 + P$$

$$P = 9800 - 2800 = \text{Rs. } 7000$$

From simple interest,

$$\frac{7000 \times R \times 4}{100} = 2800$$

$$7000 \times R \times 4 = 280000$$

$$R \times 28000 = 280000$$

$$R = \frac{280000}{28000} = 10\%$$

Now,

Amount on compound interest;

$$A = 7000 \left( 1 + \frac{10}{100} \right)^4$$

$$= 7000 (1.1)^4$$

$$= 7000 \times 1.4641$$

$$= 10248.7$$

Thus, the amount at the end of 4 years if the money is lent at compound interest is Rs. 10248.7

**Q.29** A sum of ₹2250 has a distributed among A, B, C and D. Total share of B and D is equal to  $(13/12)$  of total share of A and C. Share of D is three of share of A. Share of C is 2 times of share of A. Which of the following statement are correct according to the given information.

P) Share of A = Rs. 360

Q) Share of B = Rs. 1440

R) Share of C = Rs. 720

S) Share of D = Rs. 1080

Which of the following above given statements are true?

- A. Only P, R and Q are correct
- B. Only P, Q and S are correct
- C. Only P, R and S are correct
- D. All are correct

**Answer:** C

**Sol:**

Let the share of A = A unit

Share of D = 3A

Share of C = 2A

Given,

$$B + D = 13/12 (A + C)$$

$$12B + 12D = 13A + 13C$$

$$12B + 36A = 13A + 26A$$

$$12B = 3A$$

$$\begin{aligned}
 B &= A/4 \\
 A + B + C + D &= 1250 \\
 A + A/4 + 2A + 3A &= 1250 \\
 25A/4 &= 1250 \\
 \text{Share of A} &= 360 \\
 \text{Share of D} = 3A &= 360 \times 3 = 1080 \\
 \text{Share of C} = 2A &= 360 \times 2 = 720 \\
 \text{Share of B} &= 360/4 = 90
 \end{aligned}$$

**Q.30** P and Q started a joint business. P invested Rs50,000 in the business for one year. After 4 months, Q invested Rs70,000. At the beginning of the second year, P invested Rs20,000 more and Q withdrew Rs10,000. At the end of two years, the profit earned by P is Rs. 35,000. If they distributed half of the total profit equally and the rest in the capital ratio, what is the profit (in Rs) earned by Q?

- A. Rs. 21,200
- B. Rs.22,800
- C. Rs.24,600
- D. Rs. 33, 000

**Answer:** D

**Sol: Given:**

P invests ₹50,000 for year-1; after 4 months Q invests ₹70,000.

At start of year-2: P adds ₹20,000 → ₹70,000; Q withdraws ₹10,000 → ₹60,000.

Half the total profit is split equally; remaining half in capital–time ratio.

P's profit = ₹35,000. Find Q's profit.

**Formula Used:**

Capital–time (CT) = Sum of (capital × months).

**Solution:**

Compute CT over 24 months:

$$P: 50,000 \times 4 + 50,000 \times 8 + 70,000 \times 12 = 200,000 + 400,000 + 840,000 = 1,440,000$$

$$Q: 0 \times 4 + 70,000 \times 8 + 60,000 \times 12 = 0 + 560,000 + 720,000 = 1,280,000$$

$$\text{Ratio (P : Q)} = 1,440,000 : 1,280,000 = 9 : 8$$

P's share from total profit (T):

$$\frac{T}{4} + \frac{T}{2} \times \frac{9}{17} = \frac{35T}{68}$$

Given P's profit = ₹35,000

$$\frac{35T}{68} = 35,000 \implies T = 68,000$$

Q's profit:

$$T - P's \text{ profit} = 68,000 - 35,000 = ₹33,000$$

**Q.31** Three partners invested in a business in the ratio 5:9:1. They invested their capitals for 1 months, 9 months and 6 months, respectively. What was the ratio of their profits?

- A. 3:81:6
- B. 6:81:6
- C. 5:81:6
- D. 7:81:6

**Answer:** C

**Sol: Given:**

Capital ratio = 5 : 9 : 1

Time = 1 month, 9 months, 6 months

**Formula Used:**

Profit  $\propto$  Capital  $\times$  Time

**Solution:**

Profit ratio =  $(5 \times 1) : (9 \times 9) : (1 \times 6)$   
 $= 5 : 81 : 6$

**Q.32** A and B started a business together. A invested Rs. 36000 for 8 months while B invested some capital for 6 months. In the end B got  $\frac{15}{31}$  of the total profit, then how much money did B invest?

- A. 42000
- B. 39000
- C. 35000
- D. 45000

**Answer:** D

**Sol: Given:**

A's investment = 36000 for 8 months

B's investment =  $x$  for 6 months

B's share  $\frac{15}{31}$

**Solution :**

$A : B = (36000 \times 8) : (x \times 6)$   
 $= 288000 : 6x = 48000 : x$

$$\frac{x}{48000 + x} = \frac{15}{31}$$

$$31x = 15(48000 + x)$$

$$31x = 720000 + 15x$$

$$16x = 720000$$

$$x = 45000$$

Correct answer is (d) 45000

**Q.33** What is the product of the smallest 8 whole numbers?

- A. 5040
- B. 40320
- C. 0
- D. 1

**Answer:** C

**Sol: Given:**

The smallest 8 whole numbers are: 0, 1, 2, 3, 4, 5, 6, 7.

**Concept Used:**

Since one of the numbers is 0, the product of any set of numbers that includes 0 will be 0.

**Solution:**

Product of numbers =  $0 \times 1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7$

The product of the smallest 8 whole numbers is:

$$0 \times 1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 = 0$$

Thus, the correct option is **(c) 0**

**Q.34** A car covers a certain distance at a speed of 45 km/h and returns to the starting point following the same path at a speed of 36 km/h. Find the average speed for the entire journey (in km/h).

- A. 40
- B. 38
- C. 42
- D. 35

**Answer:** A

**Sol: Given:**

Speed while going = 45 km/h

Speed while returning = 36 km/h

**Formula Used:**

Average speed for equal distances is given by:

$$\text{Average Speed} = \frac{(2 \times x \times y)}{(x + y)}$$

**Solution:**

$$\begin{aligned} \text{Average Speed} &= \frac{(2 \times 45 \times 36)}{(45 + 36)} \\ &= \frac{3240}{81} \\ &= 40 \text{ km/h} \end{aligned}$$

The average speed for the entire journey is 40 km/h.

**Q.35** Find the HCF of  $3x^2yz$ ,  $5xy^2z$ ,  $12x^2y^2z^2$ .

- A.  $180xyz$
- B.  $xyz$
- C.  $180x^5y^5z^5$
- D.  $180x^2y^2z^3$

**Answer:** B

**Sol: Given:**

$3x^2yz$ ,  $5xy^2z$ ,  $12x^2y^2z^2$

**Solution:**

Factor each expression.

$$3x^2yz = 3 \times x \times x \times y \times z$$

$$5xy^2z = 5 \times x \times y \times y \times z$$

$$12x^2y^2z^2 = 2 \times 2 \times 3 \times x \times x \times y \times y \times z \times z$$

Common variable factors:

- x appears at least once in all  $\rightarrow x$

- y appears at least once in all  $\rightarrow y$

- z is also present in all three

Common numerical factor:

Only 1 is common among 3, 5, and 12  $\rightarrow$  1

Multiply all common factors:

$$\text{HCF} = 1 \times x \times y \times z = xyz$$

$$\text{HCF} = xyz$$

**Q.36** A can do 87.5% of the work in 35 days while B can do 65% of the same work in 23.4 days. If they work together, what fraction of the work will get done in 1 day?

- A.  $\frac{1}{19}$
- B.  $\frac{120}{19}$
- C.  $\frac{360}{1}$
- D.  $\frac{1}{20}$

**Answer:** C

**Sol: Given:**

A can do 87.5% of the work in 35 days.

B can do 65% of the work in 23.4 days.

**Solution:**

A's Work

$$87.5\% = \frac{7}{8} \text{ of work in 35 days}$$

$$\text{So full work} = 35 \times \left(\frac{8}{7}\right) = 40 \text{ days}$$

$$\text{A's 1 day work} = \frac{1}{40}$$

B's Work

$$65\% = \frac{13}{20} \text{ of work in 23.4 days}$$

$$\text{So full work} = 23.4 \times \left(\frac{20}{13}\right) = 36 \text{ days}$$

$$\text{B's 1 day work} = \frac{1}{36}$$

Combined 1 day work

$$= \frac{1}{40} + \frac{1}{36}$$

$$= \frac{36 + 40}{40 \times 36}$$

$$= \frac{9 + 10}{360}$$

$$= \frac{19}{360}$$

The fraction of work completed by A and B together in 1 day is  $\frac{19}{360}$ .

**Q.37** Travelling at  $\frac{7}{8}$  of his usual speed, Ansh covered a distance of 35 km in 50 minutes. What will be Ansh's usual speed in km/h?

- A. 54
- B. 60
- C. 48
- D. 64

**Answer:** C

**Sol: Given:**

Distance covered = 35 km

Time taken = 50 minutes =  $\frac{50}{60}$  hours

Speed used =  $\frac{7}{8}$  of the usual speed

Let the usual speed be  $x$  km/h

**Formula Used:**

$$Speed = \frac{Distance}{Time}$$

According to the question,

$$\backslash \quad Speed = \frac{Distance}{Time}$$

$$\Rightarrow \frac{5}{6} = \frac{35}{\left(\frac{7}{8} \cdot x\right)}$$

$$\Rightarrow \frac{5}{6} = \frac{35 \cdot 8}{7x}$$

$$\Rightarrow \frac{5}{6} = \frac{280}{7x}$$

$$\Rightarrow 5 \cdot 7x = 280 \cdot 6$$

$$\Rightarrow 35x = 1680$$

$$\Rightarrow x = \frac{1680}{35} = 48 \text{ km/h}$$

Ansh's usual speed is 48 km/h.

**Q.38** A man and a woman can do a work together in 12 days. Their efficiencies are in the ratio 2 : 3. Working alone, in how many days can the woman complete the work?

- A. 10
- B. 15
- C. 30
- D. 20

**Answer:** D

**Sol: Given:**

The man and woman can complete the work together in 12 days

The ratio of their efficiencies is 2 : 3

**Formula Used:**

Total work = Efficiency  $\times$  time

**Solution:**

$$\text{Total work} = 12 \times (2 + 3) = 60$$

Time taken to complete it by woman;

$$= \frac{60}{3} = 20 \text{ days}$$

**Q.39** A man can paint a house working everyday in 20 days. He decided to take a break for 1 day after every 4 days. In how many days will he complete the work now?

- A. 40
- B. 25
- C. 30
- D. 24

**Answer:** D

**Sol: Given:**

The man can paint the entire house in 20 days working every day.

He works 4 days and takes a 1-day break after every 4 days of work.

**Solution:**

Work rate of man =  $\frac{1}{20}$  of the house per day

Total time for one cycle is 5 days (4 work days + 1 break day)

In 4 work days, he completes  $\frac{1}{5}$  of the house

After 1 cycle (5 days),  $\frac{1}{5}$  of the house is painted

After 2 cycles (10 days),  $\frac{2}{5}$  of the house is painted

After 3 cycles (15 days),  $\frac{3}{5}$  of the house is painted

After 4 cycles (20 days),  $\frac{4}{5}$  of the house is painted

Remaining work = 1 (whole house) -  $\frac{4}{5}$  (work done) =  $\frac{1}{5}$  of the house

To complete the remaining  $\frac{1}{5}$  of the house,

$\frac{1/5}{1/20} = 4$  additional working days.

Total time = 20 days (from the 4 cycles) + 4 days (to complete the remaining work)

Total days = 20 + 4 = 24 days

Thus, the man will complete painting the house in 24 days

**Q.40**  $\sqrt{5}$  is a number -

- A. Rational
- B. Irrational
- C. Integer
- D. Natural

**Answer:** B

**Sol: Solution:**

$\sqrt{5}$  is the square root of 5, and it cannot be expressed as a fraction of two integers.  
The decimal expansion of  $\sqrt{5}$  is non-terminating and non-repeating, which is a characteristic of irrational numbers.

Thus,  $\sqrt{5}$  is **irrational**.

**Q.41** A sum of Rs. 75500 was borrowed at 10 percent compound interest p.a. What is the amount payable after 2 years?

- A. Rs. 91355
- B. Rs. 81000
- C. Rs. 81355
- D. Rs. 91570

**Answer:** A

**Sol: Given:**

Principal amount (P) = Rs 75500

Annual compound interest rate (r) = 10%

Time period (t) = 2 years

**Formula Used:**

$$A = P \left(1 + \frac{r}{100}\right)^t$$

Where:

A = Amount payable after interest

P = Principal

r = Rate of interest per annum

t = Time in years

**Solution:**

$$A = 75500 \times \left(1 + \frac{10}{100}\right)^2$$

$$= 75500 \times (1 + 0.10)^2$$

$$= 75500 \times (1.10)^2$$

$$= 75500 \times 1.21$$

$$= 91355$$

Thus, The amount payable after 2 years is Rs 91355

**Q.42** Salim mixes two types of milk which are 5 percent and 10 percent diluted respectively in the ratio 3 : 2. What is the concentration of milk in the resultant mixture in percentage?

- A. 95
- B. 93
- C. 80
- D. 71

**Answer:** B

**Sol: Given:**

Type 1 milk is 5% diluted, so its milk concentration is 95%.

Type 2 milk is 10% diluted, so its milk concentration is 90%.

The two types of milk are mixed in the ratio 3 : 2.

**Formula Used:**

The concentration of milk in the resultant mixture ( $C_{resultant}$ ) is calculated using the weighted average formula:

$$C_{resultant} = \frac{R_1 \times C_1 + R_2 \times C_2}{R_1 + R_2}$$

$C_1$  = Concentration of milk in Type 1

$C_2$  = Concentration of milk in Type 2

$R_1$  = Ratio part for Type 1

$R_2$  = Ratio part for Type 2)

**Solution:**

Substituting the values:

$$C_{resultant} = \frac{(3 \times 95) + (2 \times 90)}{3 + 2}$$

$$= \frac{285 + 180}{5}$$

$$= \frac{465}{5} = 93\%$$

The concentration of milk in the resultant mixture is 93%

**Q.43** Which of the following numbers will leave a remainder 1 when divided by 7, 2 and 11?

- A. 155
- B. 154
- C. 156
- D. 157

**Answer:** A

**Sol: Solution:**

**LCM of 2, 7, 11 = 154**

**Now from options:**

**Option(A) 155**

**155 ÷ 154 given 1 remainder.**

**Satisfies the condition.**

**Option(B) 154;**

**154 ÷ 154 gives remainder 0**

**not satisfies the condition;**

**Option(C) 156**

**156 ÷ 154 gives remainder 2**

**not satisfies the condition.**

**Option(D) 157**

**157 ÷ 154 gives remainder 3**

**not satisfies the condition**

**Thus, Option(A) 155 is correct.**

**Q.44** A can complete a work in 5 days. B can complete the same in 10 days. If B assists A every alternate day starting from the first day in how many days the work will be completed?

- A. 3
- B. 4
- C. 2
- D. 1

**Answer:** B

**Sol: Given:**

A alone takes 5 days to complete the work.

B alone takes 10 days to complete the work.

B helps A only on alternate days, starting with the first day.

**Formula Used:**

$$\text{Work per day} = \frac{\text{Total units}}{\text{Days taken}}$$

**Solution:**

LCM(5, 10) = 10 units of work.

$$\text{A's rate} = \frac{10}{5} = 2 \text{ units/day}$$

$$\text{B's rate} = \frac{10}{10} = 1 \text{ unit/day}$$

Two-day cycle pattern:

Day 1 (A + B):  $2 + 1 = 3$  units

Day 2 (A only): 2 units

Total work completed in one 2-day cycle =  $3 + 2 = 5$  units

$$\text{Full cycles needed to complete the work} = \frac{10}{5} = 2 \text{ cycles}$$

Each cycle takes 2 days, so the total time is  $2 \times 2 = 4$  days

Thus, The work will be completed in 4 days

**Q.45** Sia was able to run a race of 500 m in 5 minutes. What is her speed in kmph?

- A. 6
- B. 5
- C. 4
- D. 4.5

**Answer:** A

**Sol: Given:**

Sia runs a race of 500 meters.

Time taken is 5 minutes.

**Formula Used:**

$$\text{Speed (kmph)} = \frac{\text{Distance (meters)} \times 60}{\text{Time (minutes)} \times 1000}$$

**Solution:**

$$\text{Speed (m/min)} = \frac{500}{5} = 100 \text{ meters per minute}$$

$$\text{Speed (kmph)} = \frac{100 \times 60}{1000} = \frac{6000}{1000} = 6 \text{ kmph}$$

So, Sia's speed is 6 kmph

**Q.46** There are three numbers 116, 135 and 211. What is the largest possible number which divides them leaving the same remainder in each case?

- A. 6
- B. 19
- C. 7
- D. 11

**Answer:** B

**Sol: Given:**

The three numbers are 116, 135, and 211.

**Solution:**

the absolute differences between the numbers:

$$135 - 116 = 19$$

$$211 - 135 = 76$$

$$211 - 116 = 95$$

The HCF of 19, 76, and 95 is 19

Therefore, the largest possible number that divides 116, 135, and 211, leaving the same remainder in each case, is 19

**Q.47** Sumi can complete a job working 5 hours per day in 2 days. If she doubles her working hours per day, then in how many days will she complete the work?

- A. 1.5
- B. 3
- C. 1
- D. 4

**Answer:** C

**Sol: Given:**

Sumi works 5 hours per day.

She completes the job in 2 days.

**Formula Used:**

Work = Rate  $\times$  Time

**Solution:**

First, calculate the total work done by Sumi:

Total Work by Sumi =  $5 \times 2 = 10$  hours

If Sumi doubles her working hours, she will work  $2 \times 5 = 10$  hours per day

Now, to complete 10 hours of work at 10 hours per day, the number of days required is:

$$\text{Number of days} = \frac{10}{10} = 1 \text{ day}$$

So, Sumi will complete the work in 1 day if she doubles her working hours.

**Q.48** A number 'x' on dividing 115, 138 and 191 leaves remainder of 3, 5 and 2 respectively. What is the value of 'x'?

- A. 6
- B. 7
- C. 1
- D. 9

**Answer:** B

**Sol: Given:**

When 115 is divided by x, the remainder is 3

When 138 is divided by x, the remainder is 5

When 191 is divided by x, the remainder is 2

**Solution:**

$$115 - 3 = 112, 138 - 5 = 133, 191 - 2 = 189$$

Prime factorization;

$$112 = 2^4 \times 7$$

$$133 = 7 \times 19$$

$$189 = 3^3 \times 7$$

HCF of 112, 133, and 189 is 7

Thus, the value of x is 7

**Q.49** Mahesh sold his cycle for Rs 10080 after marking up the price by 40 percent. What was the cost price if he sold it after giving 20 percent discount on the marked price?

- A. Rs. 7500
- B. Rs. 8500
- C. Rs. 8000
- D. Rs. 9000

**Answer:** D

**Sol: Given:**

Selling Price (SP) = Rs 10080

Markup percentage = 40% (on Cost Price)

Discount percentage = 20% (on Marked Price)

**Formula Used:**

$$SP = MP \times \left(1 - \frac{\text{Discount}\%}{100}\right)$$

$$MP = CP \times \left(1 + \frac{\text{Markup}\%}{100}\right)$$

**Solution:**

Now, MP by Selling price as discount is 20%

$$10080 = MP \times 0.80$$

$$MP = \frac{10080}{0.80} = 12600$$

Now, Markup is 40%

$$12600 = CP \times 1.40$$

$$CP = \frac{12600}{1.40} = 9000$$

Thus, The Cost Price (CP) of the cycle was Rs 9000

**Q.50** An item was sold at Rs. 722.5 after two successive discounts of 15 percent. What would be the selling price if two successive discounts of 20 percent were applied instead?

- A. Rs. 580
- B. Rs. 720
- C. Rs. 680
- D. Rs. 640

**Answer:** D

**Sol: Given:**

The item was sold at Rs 722.5 after two successive discounts of 15% each.

We need to find the selling price if two successive discounts of 20% each are applied instead.

**Formula Used:**

$$\text{Selling Price} = \text{Marked Price} \times \left(1 - \frac{d_1}{100}\right) \times \left(1 - \frac{d_2}{100}\right)$$

Where  $d_1$  and  $d_2$  are the first and second discounts.

**Solution:**

Selling Price after two successive discounts of 15%:

$$722.5 = \text{MP} \times \left(1 - \frac{15}{100}\right) \times \left(1 - \frac{15}{100}\right)$$

$$722.5 = \text{MP} \times 0.85 \times 0.85$$

$$722.5 = \text{MP} \times 0.7225$$

$$\text{MP} = \frac{722.5}{0.7225} = 1000$$

Now, applying two successive discounts of 20%:

$$\text{New Selling Price} = 1000 \times \left(1 - \frac{20}{100}\right) \times \left(1 - \frac{20}{100}\right)$$

$$= 1000 \times 0.80 \times 0.80 = 1000 \times 0.64 = 640$$

Thus, The new selling price after two successive discounts of 20% is Rs 640

**Q.51** In a certain code language, 'TONGUE' is written as 'EOUGNT', and 'JEALOUS' is written as 'AEOUJLS'. How will 'STOMACH' be written in that language?

- A. ACMOHST
- B. MOSTACH
- C. ACOHMST
- D. AOCHMST

**Answer:** D

**Sol: Given:**

In a certain code language, 'TONGUE' is written as 'EOUGNT', and 'JEALOUS' is written as 'AEOUJLS'.

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

**Logic:** Vowels are arrange in alphabetical order, then consonants are arrange in alphabetical order.

**For,** TONGUE - EOUGNT

Vowels = E, O, U

Consonants = G, N, T

**For,** JEALOUS = AEOUJLS

Vowels = A, E, O, O

Consonants = J, L, S

Similarly,

STOMACH - ?

Vowels = A, O

Consonants = C, H, M, S, T

So, STOMACH is written as **AOCHMST**.

Thus, correct option is (d).

**Q.52** If PEACE is coded as MHXFB, then what is the code for TOWER?

- A. RTUIP
- B. SUVJQ
- C. QRTHO
- D. PQRIM

**Answer:** C

**Sol: Given:**

PEACE → MHXFB

**Logic:** -3, +3, -3, +3, -3

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Word: P E A C E

Apply the pattern:

P - 3 = M

E + 3 = H

A - 3 = X

C + 3 = F

E - 3 = B

Now, TOWER → ?

Word: T O W E R

T - 3 = Q

O + 3 = R

W - 3 = T

E + 3 = H

R - 3 = O

So, TOWER → **QRTHO**

Thus, correct option is (c).

**Q.53** If BUN = 18, MICE = 32, then what is the code for DEMON?

- A. 25
- B. 35
- C. 50
- D. 30

**Answer:** C

**Sol: Given:**

BUN = 18, MICE = 32

DEMON = ?

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

**Logic:** (Number of letters)<sup>2</sup> × 2

**BUN** → 3 letters

3<sup>2</sup> × 2

9 × 2 = 18

**MICE** → 4 letters

4<sup>2</sup> × 2

16 × 2 = 32

Similarly,

**DEMON** → 5 letters

5<sup>2</sup> × 2

25 × 2 = 50

DEMON = **50**

Thus, the correct option is: **(c)**

**Q.54** In a certain code language, mo co fo means Ram is smart, fo zo jo means Shyam is late, mo lo zo means Ram and Shyam, what is the code for 'smart'?

- A. zo
- B. fo
- C. mo
- D. co

**Answer:** D

**Sol: Given codes:**

mo co fo = Ram is smart  
fo zo jo = Shyam is late  
mo lo zo = Ram and Shyam

**mo** **co** **fo** → **Ram** **is** **smart**

**fo** **zo** **jo** → **Shyam** **is** **late**

**mo** **lo** **zo** → **Ram** **and** **Shyam**

So code of 'co' is 'smart.'  
Thus, correct option is (d).

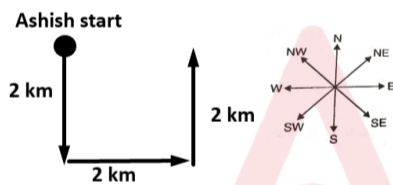
**Q.55** Ashish starts to walk 2 km towards south, turns left and walks 2 km. Then he turns left again and walks 2 km. He is facing which of the following directions?

- A. West
- B. East
- C. North
- D. South-West

**Answer:** C

**Sol: Given:**

Ashish starts to walk 2 km towards south, turns left and walks 2 km. Then he turns left again and walks 2 km. From the given information Direction will be:



So, Ashish is facing **North**.  
Thus, the correct option is: **c**

**Q.56** Paras and Shyam start walking from the same point. Paras walks 80 m north, then turns west and walks 60 m, then turns to his right and walks 40 m. Shyam walks 40 m west, then turns north and walks 120 m, then turns to his right and walks 90 m. Where is Shyam with respect to Paras now?

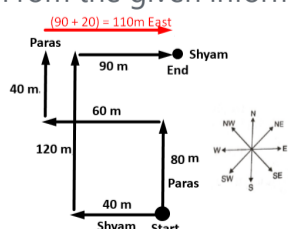
- A. 110 m west
- B. 120 m west
- C. 120 m east
- D. 110 m east

**Answer:** D

**Sol: Given:**

Paras and Shyam start walking from the same point. Paras walks 80 m north, then turns west and walks 60 m, then turns to his right and walks 40 m. Shyam walks 40 m west, then turns north and walks 120 m, then turns to his right and walks 90 m.

From the given information direction will be:



So, Shyam **110m** East with respect to Paras.  
Thus, the correct option is: **d**

**Q.57** Krish walked 250m towards south. Then he turned left and walked 200 m. He then turned left and walked 250 and then turned right and walked 150 m. Where is he standing right now with respect to his starting point?

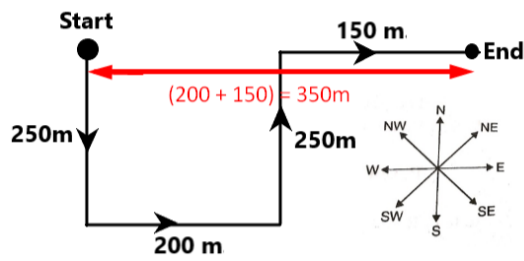
- A. 350 m west
- B. 450 m west
- C. 350 m east
- D. 450 m east

**Answer:** C

**Sol: Given:**

Krish walked 250m towards south. Then he turned left and walked 200 m. He then turned left and walked 250 and then turned right and walked 150 m.

Let's check the direction:



So, Krish is **350 m east** of his starting point.  
Thus, the correct option is: **c**

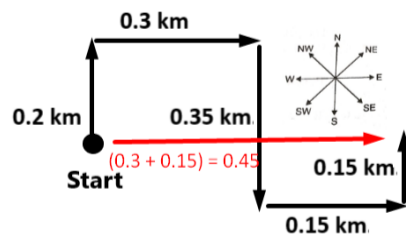
**Q.58** Nitin walks 0.2 km towards north. Then he turns right and walks 0.3 km. Then he turns right and walks 0.35 km. Then he turns left and walks 0.15 km. Finally he turns left and walks 0.15 km. Where is he standing now with respect to his initial position?

- A. 0.30 km east
- B. 0.45 km west
- C. 0.45 km east
- D. 0.30 km west

**Answer:** C

**Sol: Given:**

Nitin walks 0.2 km towards north.  
Then he turns right and walks 0.3 km.  
Then he turns right and walks 0.35 km.  
Then he turns left and walks 0.15 km. Finally he turns left and walks 0.15 km.  
From the given information direction will be:



So, Nitin is **0.45 km east** of his starting point.  
Thus, the correct option is: **d**

**Q.59** How is my mother's brother's mother's only son-in-law's father's wife's daughter's only brother is related to me?

- A. Brother
- B. Brother-in-law
- C. Father
- D. Grandfather

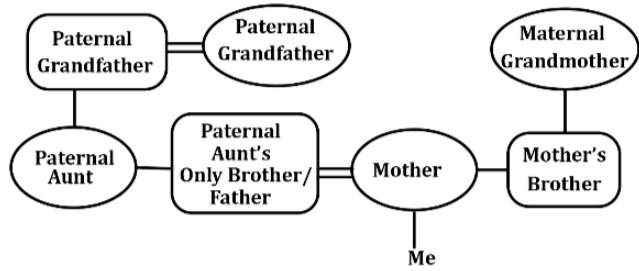
**Answer:** C

**Sol: Given:**

my mother's brother's mother's only son-in-law's father's wife's daughter's only brother is related to me

Symbol in Diagram	Meaning
- / O	Female
+ / □	Male
=	Married Couple
—	Siblings
	Difference Of Generation

From the given information family diagram will be



So, my mother's brother's mother's only son-in-law's father's wife's daughter's only brother is my "father". Thus, correct option is (c).

- Q.60** 'X is the mother of Y' is represented by 'X < Y'  
 'X is the husband of Y' is represented by 'X > Y'  
 'X is the sister of Y' is represented by 'X @ Y'  
 'X is the son of Y' is represented by 'X \$ Y'  
 Which of the following indicates the relationship 'R is the daughter of Q'?
- A. R @ H > K < Q
  - B. R @ H \$ K > Q
  - C. Q > K @ R \$ H
  - D. Q < K @ H \$ R

**Answer:** B

**Sol: Given:** 'X is the mother of Y' is represented by 'X < Y'

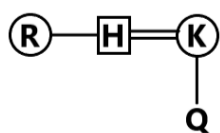
Symbol < > @ \$

Relation Mother Husband Sister Son

Symbol in Diagram	Meaning
- / O	Female
+ / □	Male
=	Married Couple
—	Siblings
	Difference Of Generation

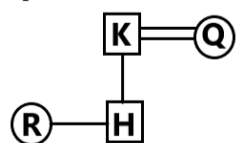
Now, we check each options.

**Option (a):** R @ H > K < Q



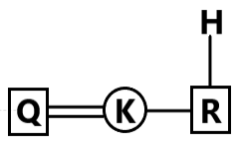
R is the aunt of Q.

**Option (b):** R @ H \$ K > Q



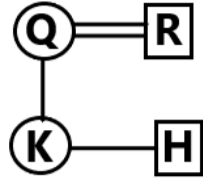
**R is daughter of Q.**

**Option (c):** Q > K @ R \$ H



R is the brother-in-law of Q.

Option (d):  $Q < K @ H \$ R$



R is the husband of Q.

So,  $R @ H \$ K > Q$  indicates the relationship 'R is the daughter of Q'.

Thus, correct option is (b).

**Q.61** A says to B, "You are the daughter of the only son of my father." How is A related to B?

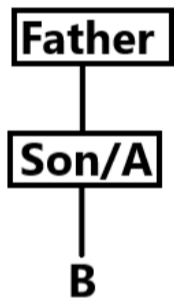
- A. Father
- B. Uncle
- C. Aunt
- D. Mother

**Answer:** A

**Sol: Given:** A says to B, "You are the daughter of the only son of my father."

Symbol in Diagram	Meaning
- / O	Female
+ / □	Male
=	Married Couple
—	Siblings
	Difference Of Generation

From the given information blood relation diagram will be.



A is the **Father** of B.

Thus, correct option is (a).

**Q.62** Introducing a boy, a girl said, "He is the son of the daughter of my father's brother." How is the boy related to the girl?

- A. Brother
- B. Nephew
- C. Cousin
- D. Uncle

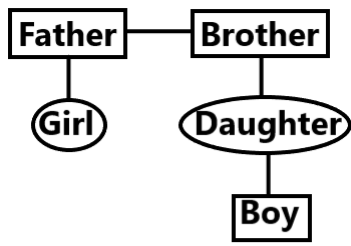
**Answer:** B

**Sol: Given:**

Introducing a boy, a girl said, "He is the son of the daughter of my father's brother."

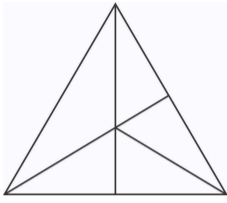
Symbol in Diagram	Meaning
- / O	Female
+ / □	Male
=	Married Couple
—	Siblings
	Difference Of Generation

From the given information blood relation will be.



The boy is **Nephew** of the girl.  
Thus, correct option is (b).

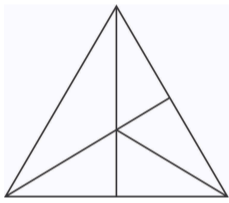
**Q.63** How many maximum number of triangles are there in the given question figure?



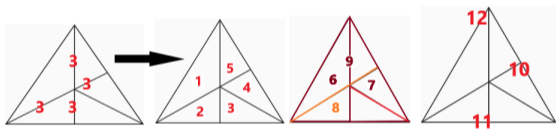
- A. 12
- B. 15
- C. 17
- D. 20

**Answer:** A

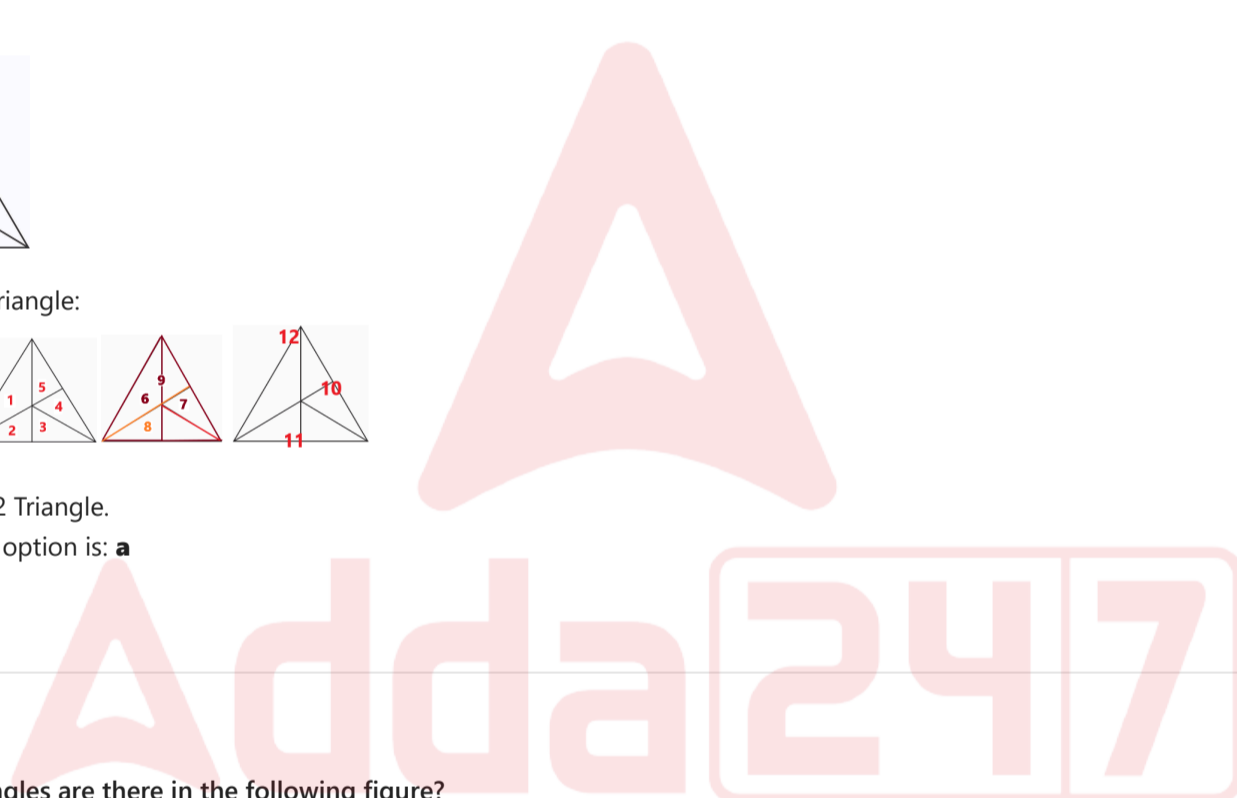
**Sol: Given:**



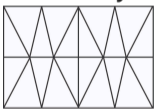
Let's Count the Triangle:



There are total 12 Triangle.  
Thus, the correct option is: **a**



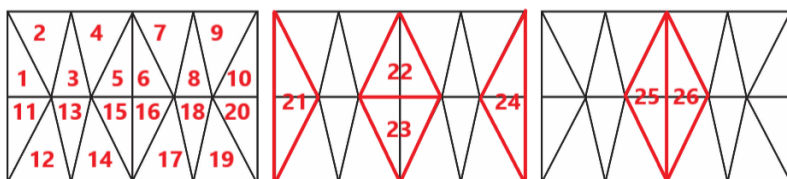
**Q.64** How many triangles are there in the following figure?



- A. 20
- B. 21
- C. 26
- D. 24

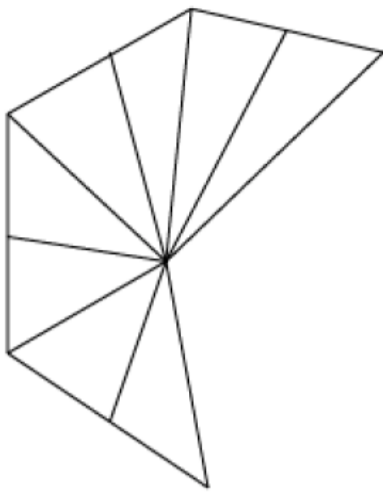
**Answer:** C

**Sol:** There are **26** triangles given below in the figure.



Thus, correct option is (c).

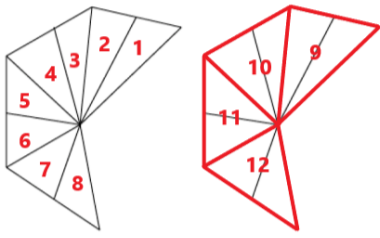
**Q.65** How many triangles are there in the following figure?



- A. 13
- B. 9
- C. 12
- D. 10

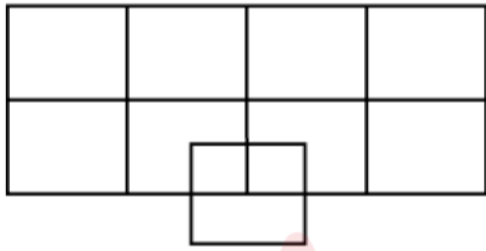
**Answer:** C

**Sol:** There are **12** triangles in the figure given below.



Thus, correct option is (c).

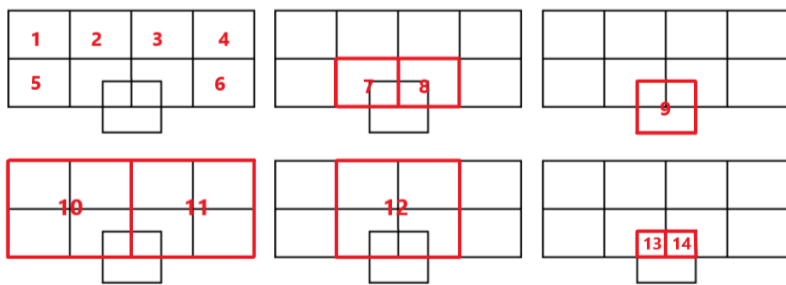
**Q.66** Find the number of squares in the following figure.



- A. 13
- B. 15
- C. 12
- D. 14

**Answer:** D

**Sol:** There are **14** square are given below in the figure.



Thus, correct option is (d).

**Q.67** In each of the number-pairs, the second number is obtained by performing a certain mathematical operation on the first number. Three of the following pairs follow the same pattern and thus form a group. Select the number-pair that does NOT belong to that group.

- A. 324 - 19
- B. 625 - 26
- C. 441 - 22
- D. 144 - 15

**Answer:** D

**Sol: Logic:**  $\sqrt{1st\ Number} + 1 = 2nd\ number$

Now, we check each options.

**Option (a):**  $324 - 19$  (Follow)

$$\sqrt{324} + 1 = 18 + 1 = 19$$

**Option (b):**  $625 - 26$  (Follow)

$$\sqrt{625} + 1 = 25 + 1 = 26$$

**Option (c):**  $441 - 22$  (Follow)

$$\sqrt{441} + 1 = 21 + 1 = 22$$

**Option (d):**  $144 - 15$  (Not Follow)

$$\sqrt{144} + 1 = 12 + 1 \neq 15$$

Thus, correct option is (d).

**Q.68** Choose the one that does NOT belong to the group.

- A. A@2 : C#4 : E%6
- B. B\$3 : D\*5 : F+7
- C. G&8 : I!10 : K^12
- D. L#11 : M@12 : N%13

**Answer:** D

**Sol:** Step 1. Observe the Pattern

Each option is a group of three pairs (Letter + Symbol + Number).

The letters generally move in a sequence.

The numbers should also follow a sequence (mostly consecutive odd or even).

Step 2. Check Each Option

(A) Letters: A, C, E → consecutive odd positions

Numbers: 2, 4, 6 → consecutive even numbers. Consistent.

(B) Letters: B, D, F → again consecutive odd positions.

Numbers: 3, 5, 7 → consecutive odd numbers. Consistent.

(C) Letters: G, I, K → consecutive odd positions.

Numbers: 8, 10, 12 → consecutive even numbers. Consistent.

(D) Letters: L, M, N → consecutive letters (but here it's continuous, not skipping like others)

Numbers: 11, 12, 13 → consecutive natural numbers, not only odd/even. - Breaks the pattern.

Step 3. Final Answer

The Odd One Out is:

(D) L#11 : M@12 : N%13

**Q.69** The second number in each of the number-pairs is obtained by performing certain mathematical operations on the first number. Three of the following four number-pairs follow the same pattern and thus form a group. Select the number-pair that does NOT belong to that group.

- A. 19 : 363
- B. 14 : 197
- C. 17 : 290
- D. 13 : 170

**Answer:** A

**Sol: Logic:**  $1st\ number^2 + 1 = 2nd\ number$

Now, we check each options.

**Option (a):** 19 : 363 (Not Follow)

$$19^2 + 1 = 361 + 1 \neq 363$$

**Option (b):** 14 : 197 (Follow)

$$14^2 + 1 = 196 + 1 = 197$$

**Option (c):** 17 : 290 (Follow)

$$17^2 + 1 = 289 + 1 = 290$$

**Option (d):** 13 : 170 (Follow)

$$13^2 + 1 = 169 + 1 = 170$$

Thus, correct option is (a).

**Q.70** Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- A. JKP
- B. FGL
- C. RSX
- D. MRZ

**Answer:** D

**Sol:**

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

**Logic:** Follow the +1, +5 alphabetical sequence.

**Let's check each options:**

**Option A: JKP**

J + 1 → K

K + 5 → P

**Option B: FGL**

F + 1 → G

G + 5 → L

**Option C: RSX**

R + 1 → S

S + 5 → X

**Option D: MRZ**

M + 5 → R

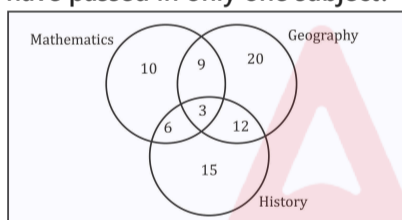
R + 8 → Z (**Not Follow**)

Options A, B, and C follow the +1, +5 alphabetical sequence, while D does not follow.

So, the odd one out **MRZ**

Thus, the correct option is: **(d)**

**Q.71** The given Venn diagram shows the number of students who have passed in Mathematics, Geography and History. How many of these students have passed in only one subject?



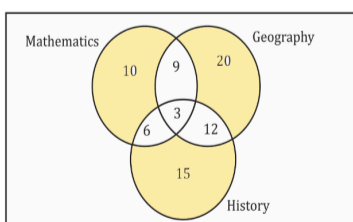
- A. 30
- B. 27
- C. 28
- D. 45

**Answer:** D

**Sol: Given:**

Venn diagram shows the number of students who have passed in Mathematics, Geography and History.

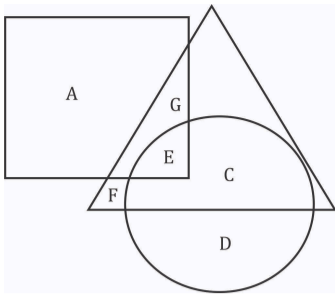
**Let's check the Venn:**



So,  $(10 + 20 + 15) = 45$  students have passed in only one subject.

Thus, the correct option is: **d**

**Q.72** In the following figure, triangle represents uneducated, square represents employed, circle represents male. Which area represents uneducated employed who are female?

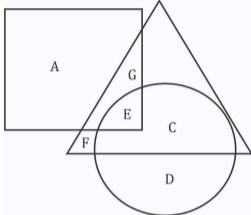


- A. E
- B. G
- C. C
- D. F

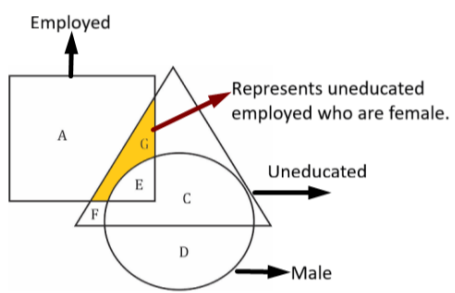
**Answer:** B

**Sol: Given:**

Triangle represents uneducated, square represents employed, circle represents male.

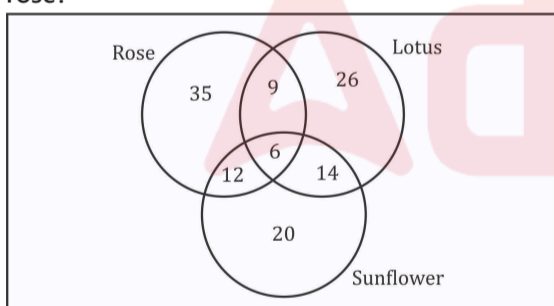


Let's check:



So, area **G** represents uneducated employed who are female.  
Thus, the correct option is: **b**

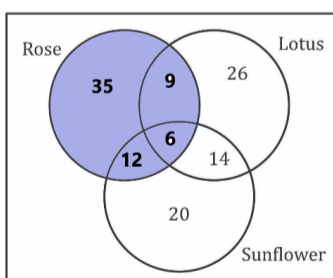
**Q.73** The given Venn diagram shows the number of friends who have got rose, sunflowers and lotus in an event. How many of these friends have got rose?



- A. 41
- B. 35
- C. 62
- D. 56

**Answer:** C

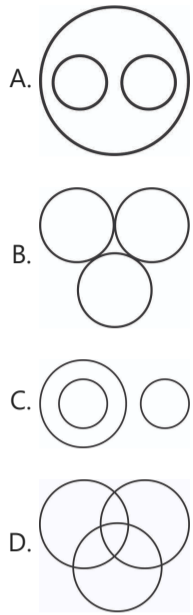
**Sol: Given:**



From the diagram, Rose circle includes:  
 Only Rose = 35  
 Rose & Lotus = 9  
 Rose & Sunflower = 12  
 All three (Rose + Lotus + Sunflower) = 6  
 Total with Rose =  $35 + 9 + 12 + 6 = 62$

Thus, correct option is (c).

**Q.74** Which of the following Venn diagrams best represents the relationship between transport, car and ship?

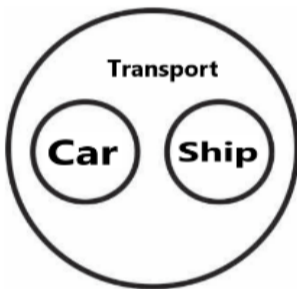


**Answer:** A

**Sol:** Given:

**Transport, car, and ship**

From the given information Venn Diagram will be:



**Car** and **Ship** are both **types of transport**.

However, **Car** and **Ship** are **not related directly** to each other.

**Transport** should be a large circle that **includes** both **Car** and **Ship**.

Thus, the correct option is: **a**

**Q.75** Which two numbers should be interchanged to make the given equation correct?

$$672 \div 7 \times 8 + 38 - 29 = 597$$

- A. 38, 29
- B. 7, 8
- C. 8, 38
- D. 7, 38

**Answer:** B

**Sol: Given:**

$$672 \div 7 \times 8 + 38 - 29 = 597$$

Operation preference wise	Symbol
Brackets	$[], , ()$
Orders, of	$(power), \sqrt{(root)}, of$
Division	$\div$
Multiplication	$\times$
Addition	$+$
Subtraction	$-$

Let's check each options:

**Option A:** Interchange 38 and 29

$$672 \div 7 \times 8 + 29 - 38 = 597$$

$$96 \times 8 + 29 - 38 = 597$$

$$768 + 29 - 38 = 597$$

$$797 - 38 = 597$$

$$759 \neq 597$$

**Option B:** Interchange 7 and 8

$$672 \div 8 \times 7 + 38 - 29 = 597$$

$$84 \times 7 + 38 - 29 = 597$$

$$588 + 38 - 29 = 597$$

$$626 - 29 = 597$$

$$597 = 597 \text{ (Follow)}$$

**Option C:** Interchange 8 and 38

$$672 \div 7 \times 38 + 8 - 29 = 597$$

$$96 \times 38 + 8 - 29 = 597$$

$$3648 + 8 - 29 = 597$$

$$3656 - 29 = 597$$

$$3627 \neq 597$$

**Option D:** Interchange 7 and 38

$$672 \div 38 \times 8 + 7 - 29 = 597$$

$$672 \div 38 = 17.6842\dots(\text{not an integer})$$

Thus, the correct option is: **b**

**Q.76** If '+' means 'division', '÷' means 'subtraction', '-' means 'multiplication' and '×' means 'addition', then what is the value of X in the following equation?

$$200 + 10 - 25 \times 60 \div 20 = X$$

- A. 500
- B. 540
- C. 560
- D. 520

**Answer:** B

**Sol: Given:**  $200 + 10 - 25 \times 60 \div 20 = X$

Given Sign + ÷ - ×

New Sign ÷ - × +

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], (), \{\}$
Orders, of	$(\text{power}), \sqrt{(\text{root}), \text{of}}$
Division	$\div$
Multiplication	$\times$
Addition	$+$
Subtraction	$-$

New equation:  $200 \div 10 \times 25 + 60 - 20 = X$

$$20 \times 25 + 60 - 20 = X$$

$$500 + 60 - 20 = X$$

$$560 - 20 = X$$

$$X = 540$$

Thus, correct option is (b).

**Q.77** If '+' means '-', '÷' means '+', '-' means '×', and '×' means '÷', then what is  $25 - 3 \div 5 + 10 = ?$

- A. 65
- B. 70
- C. 75
- D. 80

**Answer:** B

**Sol: Given:**  $25 - 3 \div 5 + 10 = ?$

Given Sign + ÷ - ×

New Sign - + × ÷

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], (), \{\}$
Orders, of	$(power), \sqrt{(root)}, of$
Division	$\div$
Multiplication	$\times$
Addition	$+$
Subtraction	$-$

**New equation:**  $25 \times 3 + 5 - 10 = ?$

$75 + 5 - 10 = ?$

$80 - 10 = ?$

$? = 70$

Thus, correct option is (b).

**Q.78** Which two signs should be interchanged to make the equation correct?

$69 \times 3 - 4 \div 5 + 6 = 9$

- A.  $\div$  and  $+$
- B.  $\times$  and  $+$
- C.  $+$  and  $-$
- D.  $\times$  and  $\div$

**Answer:** D

**Sol: Given:**  $69 \times 3 - 4 \div 5 + 6 = 9$

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], (), \{\}$
Orders, of	$(power), \sqrt{(root)}, of$
Division	$\div$
Multiplication	$\times$
Addition	$+$
Subtraction	$-$

Now, we check each options.

**Option (a):**  $\div$  and  $+$

**New equation:**  $69 \times 3 - 4 + 5 \div 6 = 9$

5 is not divisible by 6.

**Option (b):**  $\times$  and  $+$

**New equation:**  $69 + 3 - 4 \div 5 \times 6 = 9$

4 is not divisible by 5.

**Option (c):**  $+$  and  $-$

**New equation:**  $69 \times 3 + 4 \div 5 - 6 = 9$

4 is not divisible by 5.

**Option (d):**  $\times$  and  $\div$

**New equation:**  $69 \div 3 - 4 \times 5 + 6 = 9$

$23 - 4 \times 5 + 6 = 9$

$23 - 20 + 6 = 9$

$29 - 20 = 9$

**$9 = 9$**

Thus, correct option is (d).

**Q.79** Two statements I and II are given. These statements may be either independent causes or may be the effects of independent causes or a common cause. One of these statements may be the effect of the other statement. Read both the statements and decide which of the following options correctly depicts the relationship between these two statements.

**Statements:**

- I. A substantial increase in the spread of COVID positive cases especially among people less than 18 years of age is expected in the city during the next 2 months.
- II. The government has announced that all schools will remain closed until the COVID situation subsides.

- A. Statement I is the cause and statement II is its effect
- B. Both statements I and II are independent causes
- C. Both statements I and II are the effects of independent causes
- D. Statement II is the cause and statement I is its probable effect

**Answer:** A

**Sol: Statements:**

I. A substantial increase in the spread of COVID positive cases especially among people less than 18 years of age is expected in the city during the next 2 months.

(It talks about the expected **increase in COVID cases** among people under 18.)

II. The government has announced that all schools will remain closed until the COVID situation subsides.

(It is the government's response by **keeping schools closed** until the situation improves.)

**Statement I is the cause and statement II is its effect.**

Thus, correct option is (a).

**Q.80** In the question one statement is given, followed by two course of actions, I and II. You have to consider the statement to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given course of actions, if any, follows from the given statement.

**Statement:** A large number of people in area A of the city are diagnosed with COVID-19.

**Course of Actions:**

I : The city municipal authority should take immediate steps to carry out extensive testing of people in area A.

II : The people in the area should be advised to take necessary precautionary steps to avoid COVID-19.

- A. Only I follows
- B. Only II follows
- C. Neither I nor II follows
- D. Both I and II follow

**Answer:** D

**Sol: Statement:**

A large number of people in area A of the city are diagnosed with COVID-19.

This indicates a serious health concern in a specific area. Let's evaluate the Courses of Action.

**Course of Action I:**

"The city municipal authority should take immediate steps to carry out extensive testing of people in area A."

This is a logical and preventive action to identify more cases and control the spread.

→ **This follows.**

**Course of Action II:**

"The people in the area should be advised to take necessary precautionary steps to avoid COVID-19."

Advising people to follow precautions (like masks, distancing, etc.) is a reasonable and necessary step.

→ **This also follows.**

So, **Both I and II follow.**

Thus, correct option is (d).

**Q.81** In the below question two statements I and II are given. These statements may either be independent causes or may be effects of independent causes or a common cause. One of these statements may be the effect of the other statement. Read both the statements and decide which of the following answer choice correctly depicts the relationship between these two statements.

**Statements:**

I. Saketh lost his job as a software professional due to the recession last month.

II. Ayansh, a salesperson, received only half his salary as there is fall in demand for their products in the market

- A. Statement I is the cause and statement II is its effect.
- B. Both the statements I and II are effects of a common cause.
- C. Both the statements I and II are independent causes.
- D. Statement II is the cause and statement I is its effect.

**Answer:** B

**Sol: Statements:**

I. Saketh lost his job as a software professional due to the recession last month.

Saketh losing his job is caused by the recession.

II. Ayansh, a salesperson, received only half his salary as there is fall in demand for their products in the market.

Ayansh receiving half salary is caused by a fall in demand, which is also a result of the recession.

So, **Both the statements I and II are effects of a common cause.**

Thus, correct option is (b).

**Q.82** Read the situation and choose the best judgment:

You are on a crowded public bus during peak hours. At the next stop, an elderly person using crutches boards the bus, and all the seats are occupied. People around you seem to be avoiding eye contact.

- A. Call out loudly, asking if anyone is willing to give up their seat for the elderly person.

- B. Politely offer your seat to the elderly person.
- C. Remain in your seat, assuming someone else closer to the person will offer theirs.
- D. Inform the bus driver that there's an elderly person standing and they should ask someone to vacate a seat.

**Answer:** B

**Sol: Given:**

You are on a crowded public bus during peak hours. At the next stop, an elderly person using crutches boards the bus, and all the seats are occupied. People around you seem to be avoiding eye contact.

Because, this shows empathy, responsibility, and respect. It's a direct action that immediately helps the elderly person, instead of shifting responsibility to others.

So, **Politely offer your seat to the elderly person.**

Thus, correct option is (b).

**Q.83** In what way can the terms of the given set be rearranged into three sets such that the sum of the two terms in each set is equal?  
(947, 861, 1304, 1218, 1378, 787)

- A. (787, 1378), (947, 1304), (861, 1281)
- B. (947, 1218), (861, 1304), (787, 1378)
- C. (861, 1218), (947, 1378), (1304)
- D. (947, 1304), (861, 1378), (787, 1218)

**Answer:** B

**Sol: Given:**

947, 861, 1304, 1218, 1378, 787

**Logic:** three pairs such that each pair sums to the same total.

Option B:

(947, 1218), (861, 1304), (787, 1378)

Check sums:

$$947 + 1218 = 2165$$

$$861 + 1304 = 2165$$

$$787 + 1378 = 2165$$

All three pairs sum to **2165**

Thus, correct option is (b).



**Q.84** In each of the following questions, a word is transformed into another word by applying a specific alphabetical pattern to each of its letters. Identify the logic used in the first pair and apply the same logic to the second word to determine the correct answer.

A1#: F6@ :: ?

- A. D3#: I4@
- B. E5#: J6@
- C. A2#: G7@
- D. C2#: H7@

Answer: D

**Sol:**

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

**A1#: F6@**

First letter A + 5 = F

second number = 1 + 5 = 6

"#" to "@" → The symbol changes based on a set pattern.

**Now, for C2#: ?:**

C + 5 = H

2 + 5 = 7

"#" to "@" → The symbol remains the same.

Thus, C2# → H7@.

This completes the analogy.

**Correct Option:** D) C2#: H7@

**Q.85** If 29@12 = 34, 57@38 = 38, 45@29 = 32, then 67@49 = ?

- A. 18
- B. 52
- C. 9
- D. 36

Answer: D

**Sol: Given:**

29@12 = 34, 57@38 = 38, 45@29 = 32, then 67@49 = ?

**Logic:** (First number - Second number) × 2 = Result

Check the pattern with given values:

29@12

(29 - 12) × 2 = 17 × 2 = 34

57@38

(57 - 38) × 2 = 19 × 2 = 38

45@29

(45 - 29) × 2 = 16 × 2 = 32

Now solve: 67@49

(67 - 49) × 2 = 18 × 2 = **36**

Thus, correct option is (d).

**Q.86** Which option pair shares the same relationship between its words as that shared by the words in the below pair?

MF : PC :: ?

- A. MH : PL
- B. KS : PT
- C. PF : RD
- D. LT : OQ

Answer: D

**Sol: Given Pair:** MF : PC

M + 3 → P

F - 3 → C

**Logic:** First letter: +3, Second letter: -3

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Option A: MH : PL

M + 3 = P

H - 3 = E, but given is L

**Not matching**

Option B: KS : PT

$K + 3 = N$ , but given is P

$S - 3 = P$ , but given is T

**Not matching**

Option C: PF : RD

$P + 3 = S$ , but given is R

$F - 3 = C$ , but given is D

**Not matching**

Option D: LT : OQ

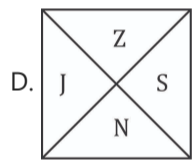
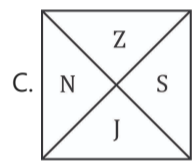
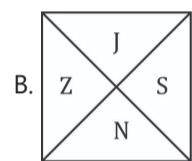
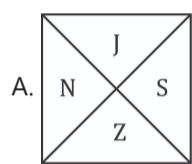
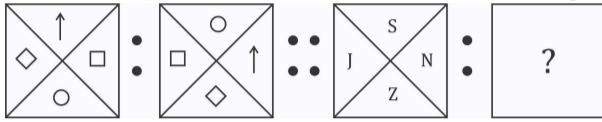
$L + 3 = O$

$T - 3 = Q$

**Matches the pattern.**

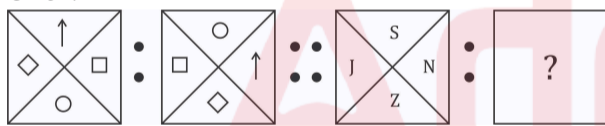
Thus, correct option is (d).

**Q.87** Select the option that is related to the third image on the same basis as the second image is related to the first image.

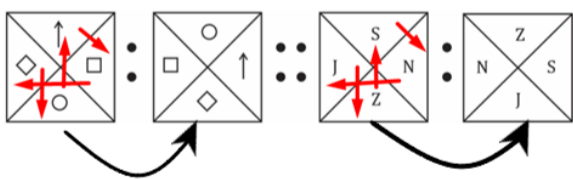


**Answer:** C

**Sol:** Given:

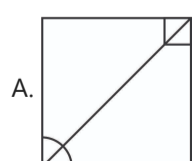
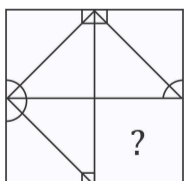


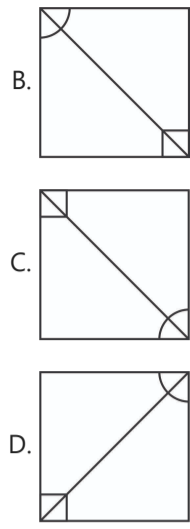
Let's check the next pattern:



Thus, the correct option is: **c**

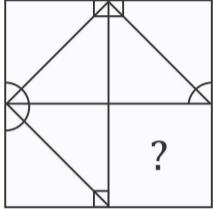
**Q.88** Which of the following answer figure patterns can be combined to make the question figure?





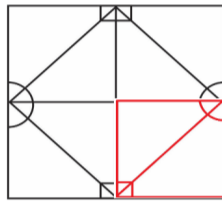
**Answer:** D

**Sol: Given:**



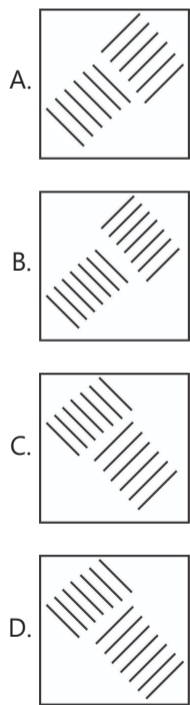
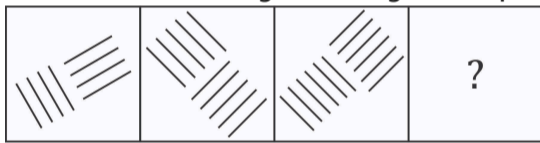
Let's check:

The missing figure that will complete the figure is shown below.



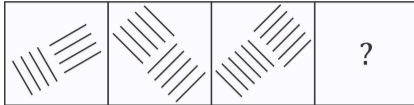
Thus, the correct option is: **d**

**Q.89** Which of the following answer figure completes the series of the question figure?

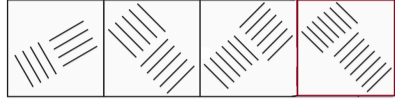


**Answer:** D

Sol: Given:



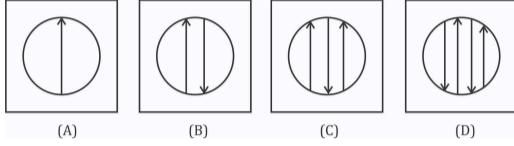
Logic: Each step adds 1 more lines.



So, next step line count 7.

Thus, the correct option is: **d**

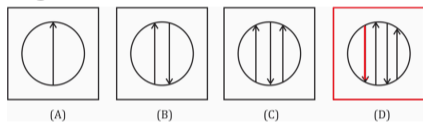
Q.90 Which of the following options is the wrong figure in the series?



- A. A
- B. C
- C. B
- D. D

Answer: D

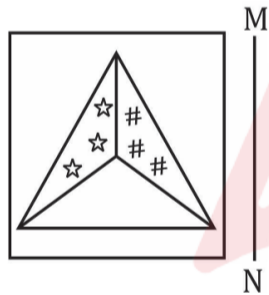
Sol: Logic: The arrows inside the circle must increase one by one with alternate up-down directions, but in (D) the alternation breaks,



So, the **wrong figure** in the series is **(D)**.

Thus, the correct option is: **d**

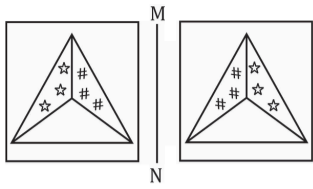
Q.91 If a mirror is placed on the line MN, then which of the answer figures is the correct mirror image of the given figure?



- A.
- B.
- C.
- D.

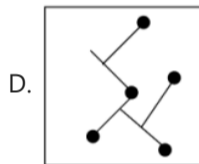
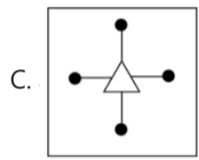
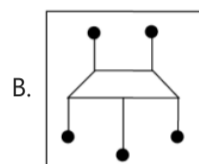
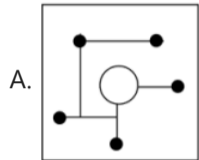
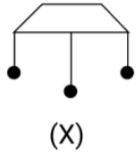
Answer: D

Sol: Given figures the correct mirror image is:



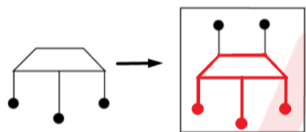
Thus, the correct option is: **d**

**Q.92** Select the option in which the given figure (X) is embedded (rotation is NOT allowed).



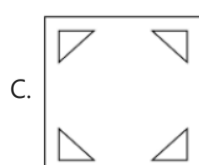
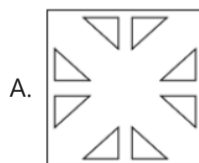
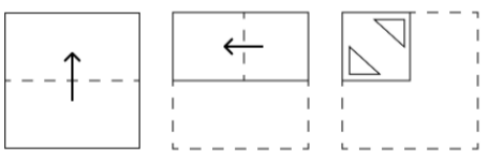
**Answer:** B

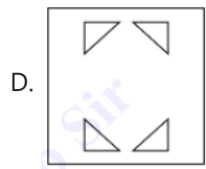
**Sol:** The correct embedded figure is shown below.



Thus, the correct option is: **(b)**

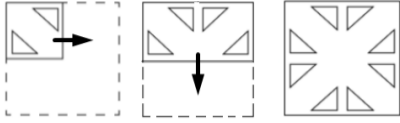
**Q.93** The sequence of folding a piece of paper and the manner in which the folded paper is cut is shown in the following figures. How would this paper look when unfolded?





Answer: A

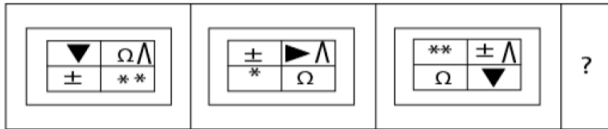
Sol: After unfolding the given figure following cuts will be shown as given below.



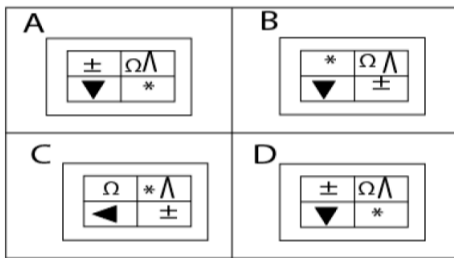
Thus, the correct option is: (a)

Q.94 Which figure follows next in this pattern:

Problem Figure:



Answer Figures:



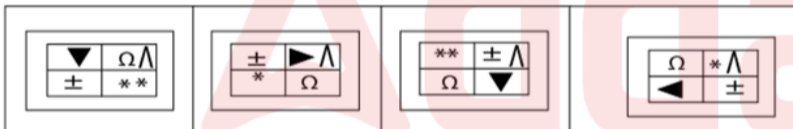
- A. B
- B. C
- C. D
- D. A

Answer: B

Sol: Logic: 1. Triangle is rotating anticlock wise and moving in the block clock wise direction.

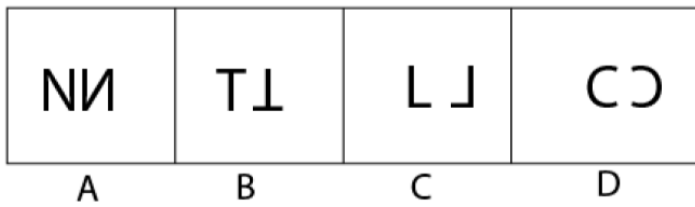
2. Symbols are moving clock wise direction in the block.

3. ^ sign is fix in the sereis and \* is moving with alternating + 1 and - 1.



Thus, correct option is (b).

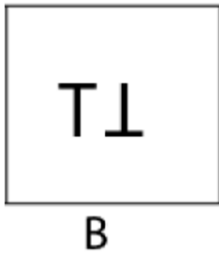
Q.95 Find the odd one out.



- A. A
- B. C
- C. B
- D. D

Answer: C

Sol: Logic: In figure A, C and D mirror image of the letter.



But in figure **B** water image of the letter.  
So, **B** is odd one out.  
Thus, correct option is (c).

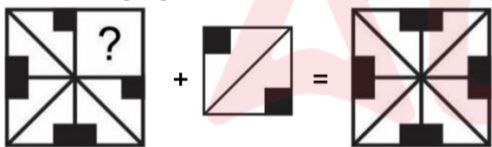
**Q.96** Which answer figure will complete the pattern in the question figure?



- A.
- B.
- C.
- D.

**Answer:** A

**Sol:** The missing figure that will complete the figure is.



Given figure + **Option (a)** = Complete figure  
Thus, correct option is (a).

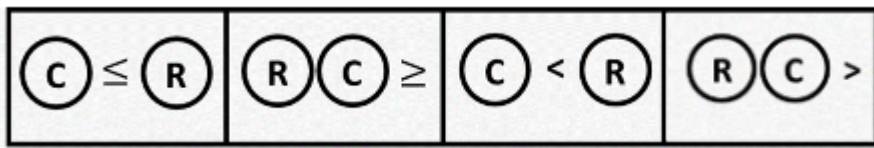
**Q.97** What will come in the place of question mark in the below series?

$C \leq R$	$R C \geq$	$C < R$	?
A	B	C	D
$C > R$	$R > C$	$R C >$	$R < C$

- A. D
- B. A
- C. B
- D. C

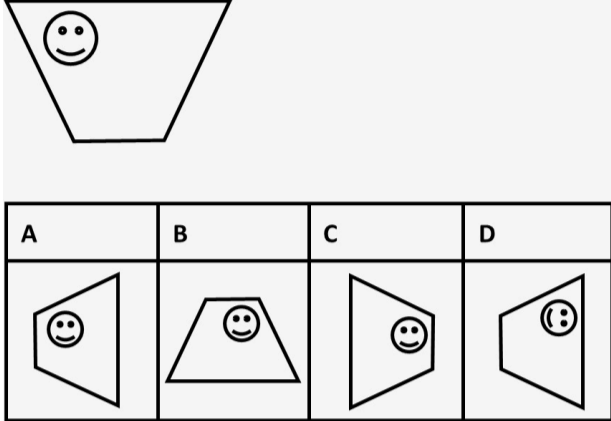
**Answer:** D

**Sol: Logic:** All element is moving one times right side and mirror image in the middle term.



So, **figure C** is correct.  
Thus, correct option is (d).

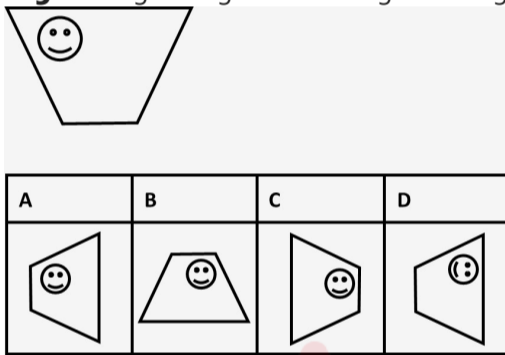
**Q.98** Which pattern, of the ones shown in the below options, resembles closest to:



- A. B
- B. D
- C. A
- D. C

**Answer:** B

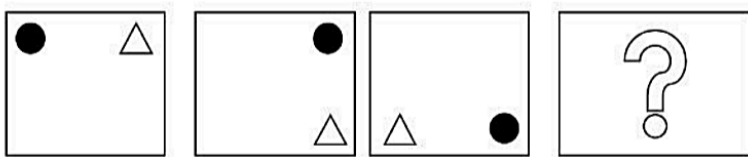
**Sol: Logic:** The given figure is rotating at 90 degree clock wise direction.



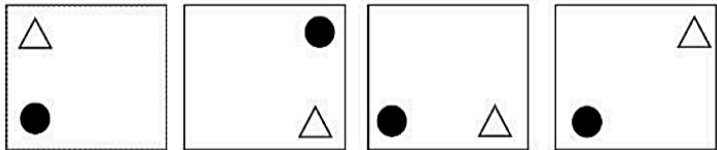
So, the correct figure is **D**.  
Thus, correct option is (b).

**Q.99** What should be at the place of question mark?

Question Figure:



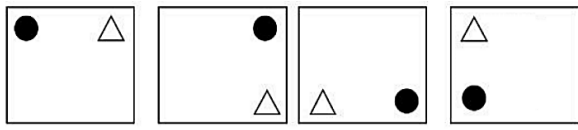
Answer Figure:



- A. A
- B. D
- C. C
- D. B

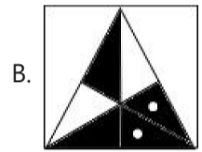
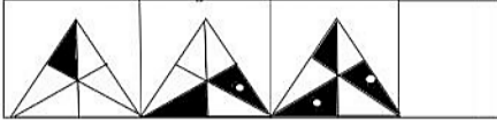
**Answer:** A

**Sol:** Elements are moving to their right position each time.



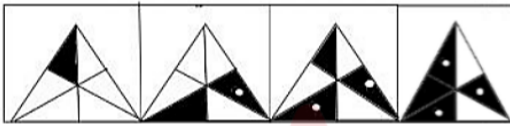
Thus, correct option is (a).

**Q.100** What will come at the place of blank space?



**Answer:** D

**Sol: Logic:** One shaded part is increasing alternatively. Dot is also comes alternatively.



Thus, correct option is (d).

