

Wipro Aptitude Questions and Answers with Explanation Set - II



1. The length and the breadth of a rectangular door are increased by 1 m each and due to this the area of the door increased by 21 sq. m. But if the length is increased by 1 m and breadth decreased by 1 m, area is decreased by 5 sq. m. Find the perimeter of the door.

- A. 25 m
- B. 20 m
- C. 40 m
- D. 60 m
- E. 24 m

Answer - C. 40 m

Explanation:

Let original length = l , breadth = b , so area = lb

When l and b increased by 1:

$$(l+1)(b+1) = lb + 21$$

$$\text{Solve, } l + b = 20$$

When l increased by 1, b decreased by 1:

$$(l+1)(b-1) = lb - 5$$

$$\text{Solve, } l - b = 6$$

Now solve both equations, $l = 13$, $b = 7$

$$\text{Perimeter} = 2(13+7) = 2(20) = 40\text{m}$$

2. The perimeter of a rectangular plot is 340 m. Find the cost of gardening 1 m broad boundary around it at the rate of Rs 10 per sq. m.

- A. Rs 3450
- B. Rs 3400
- C. Rs 3480
- D. Rs 3440
- E. Rs 3880

Answer - D. Rs 3440

Explanation:

$$\text{Given } 2(l+b) = 340$$

1 m broad boundary means increase in l and b by 2 m

$$\text{So area of the boundary will be } [(l+2)(b+2) - lb] = 2(l+b) + 4 = 340 + 4 = 344$$

$$\text{So cost of gardening} = 344 \times 10 = 3440$$

3. The side of a square shaped garden is $8\sqrt{2}$. Find the maximum possible distance between any two corners

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- A. 18 metre
- B. 15 metre
- C. 16 metre
- D. 14 metre
- E. None of the Above

Answer – C. 16 metre

Explanation :

$$d = a\sqrt{2}$$

$$a = 8\sqrt{2}$$

$$d = 8\sqrt{2} * \sqrt{2} = 8 * 2 = 16 \text{ m}$$

4. If the side of the square is increased by 30%, then how much % does its area get increased?

- A. 59%
- B. 69%
- C. 79%
- D. 49%
- E. None of these

Answer – B. 69%

Explanation :

$$\text{Area of the plot} = 1.3 * 1.3 = 1.69 = 69\%$$

5. The perimeter of a square is equal to twice the perimeter of a rectangle of length 10 cm and breadth 4 cm. What is the circumference of a semi-circle whose diameter is equal to the side of the square?

- A. 38 cm
- B. 23 cm
- C. 46 cm
- D. 36 cm
- E. None of these

Answer – D. 36 cm

Explanation :

$$\text{Perimeter of square} = 2(l + b)$$

$$= 2 * 2(10 + 4) = 2 * 28 = 56 \text{ cm}$$

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Side of square = $56/4 = 14$ cm

Radius of semi- circle = $14/2 = 7$ cm

Circumference of the semi-circle = $22/7 * 7 + 14 = 36$ cm

6. A Boat takes 128 min less to travel to 48 Km downstream than to travel the same distance upstream. If the speed of the stream is 3 Km/hr. Then Speed of Boat in still water is?

- A. 6 Km/hr
- B. 9 Km/hr
- C. 12 Km/hr
- D. 15 Km/hr
- E. None

Answer – C. 12 Km/hr

Explanation :

$$32/15 = 48(1/s-3 - 1/s+3)$$

$$s = 12$$

Therefore, Speed of the Boat in still water is 12 Km/hr

7. The speed of Boat in Still water is 40 Km/hr and speed of the stream is 20 Km/hr. The distance between Point A and Point B is 480 Km. The boat started traveling downstream from A to B, in the midway, it is powered by an Engine due to which speed of the Boat increased. Now Boat reached Point B and started back to point A with help of the same engine. It took 19 hours for the entire journey. Then with the help of the engine, the speed of the boat increased by how many Km/hr?

- A. 10 Km/hr
- B. 15 Km/hr
- C. 20 Km/hr
- D. 24 Km/hr
- E. Cannot be determined

Answer – C. 20 Km/hr

Explanation :

$$19 = 240/60 + 240/60+x + 480/20+x$$

$$x = 20$$

Therefore, the speed of the boat increased is = 20 Km/hr.

8. A Boat covers upstream in 12 Hours 48 minutes to travel distance from Point A to B, while it takes 6 hours to cover 3/4th of the same distance running downstream. The speed of the

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current is 15 Km/hr. The boat covered both forward distance from A to B and backward distance from B to A. Then what is the distance between A and B?

- A. 360 Km
- B. 480 Km
- C. 540 Km
- D. 640 Km
- E. Cannot be determined

Answer – D. 640 Km

Explanation :

$$(S+R)*8 = (S-R)*64/5$$

$$S:R = 13:3$$

$$R = 15 \quad S = 65$$

$$D = (65+15) *8 = 640$$

The Distance between A and B is 640 Km.

9. Ashok can row upstream at 8kmph and downstream at 12kmph.What is the speed of the stream ?

- A. 6 km/hr
- B. 3 km/h
- C. 2 km/hr
- D. 4 km/hr

Answer - C. 2 km/hr

Explanation:

Speed downstream a = 12 kmph

Speed upstream b = 8 kmph

$$\text{Speed of the stream} = \frac{1}{2} (a-b) = \frac{1}{2} (12-8)$$

$$= 4/2 = 2 \text{ kmph}$$

speed of the stream = 2kmph

10. If Nishu can swim downstream at 6kmph and upstream at 2kmph.What is his speed in still water ?

- A. 5 km/hr
- B. 4 km/hr
- C. 8 km/hr
- D. 7 km/hr

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Answer - B. 4km/hr

Explanation:

Given : speed downstream a = 6km/hr

Speed upstream b = 2 km/hr

Speed in still water = $\frac{1}{2}(a+b)$ km/hr

= $\frac{1}{2}(6+2)$

= $\frac{8}{2} = 4$ km/hr

speed in still water = 4km/hr

11. A man rows 750m in 775 seconds against the stream and returns in 7 1/2 minutes. What is rowing speed in still water ?

A. 4.7km/hr

B. 4km/hr

C. 3.5km/hr

D. 6km/hr

Answer - A. 4.7km/hr

Explanation:

Speed upstream 'b' = $750\text{m} / 775\text{ sec} = 30/31\text{ m/sec}$

Speed downstream 'a' = $750\text{ m} / (15/2)\text{minutes} [1\text{min}=60\text{ sec}] a = 750\text{m}/450\text{ sec} = 5/3\text{ m/sec}$

speed in still water = $\frac{1}{2}(a+b)$

= $\frac{1}{2}(750/450 + 750/675)\text{ m /sec}$

= $\frac{1}{2}(750/450 + 750/675) \times 18/5\text{ km/hr}$

= $\frac{1}{2}(5/3 + 30/31) \times 18/5\text{ km/hr}$

= 4.7 km/hr

12. A man can row 9 (1/3) kmph in still water and finds that it takes him thrice as much time to row up than as to row down the same distance in the river. What is speed of the current ?

A. 5km/hr

B. $3(1/2)$ km/hr

C. $4(2/3)$ km/hr

D. $8(3/2)$ km/hr

Answer - C. $4(2/3)$ km/hr

Explanation:

Given Speed in still water = $9(1/3) = 28/3\text{ km/hr}$

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$$\text{i.e., } \frac{1}{2}(a+b) = \frac{28}{3} \text{ km/hr}$$

$$\frac{1}{2}(x+3x) = \frac{28}{3}$$

$$2x = \frac{28}{3} \quad x = \frac{28}{2 \times 3} = \frac{14}{3} \text{ km/hr}$$

rate upstream $b = \frac{14}{3}$ km/hr and

rate downstream $a = \frac{14}{3} \times 3 = 14$ km/hr

$$\text{speed of the current} = \frac{1}{2}(a-b) = \frac{1}{2}(14 - \frac{14}{3})$$

$$= \frac{1}{2}(42 - \frac{14}{3}) = \frac{28}{6} = 4 \frac{2}{3} \text{ km/hr}$$

13. A sum of rupees 3200 is compounded annually at the rate of 10 paisa per rupee per annum. Find the compound interest payable after 2 years.

- A. 200
- B. 842
- C. 672
- D. 832
- E. None of these

Answer – C. 672

Explanation :

Rate of interest is 10 paisa per rupee per annum. So for 100 rupees it is 1000 paise i.e. 10 percent

$$\text{Now, CI} = 3200(1 + \frac{10}{100})^2 - 3200 = 672$$

Therefore, the compound interest payable after 2 years is 672.

14. What sum of money will amount to rupees 1124.76 in 3 years, if the rate of interest is 5% for the first year, 4% for the second year and 3% for the third year?

- A. 1500
- B. 1200
- C. 1000
- D. 1900
- E. None of these

Answer – C. 1000

Explanation :

$$1124.76 = p \times (\frac{105}{100}) \times (\frac{104}{100}) \times (\frac{103}{100}) = 1000$$

15. Riya saves an amount of 500 every year and then lent that amount at an interest of 10 percent compounded annually. Find the amount after 3 years.

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- A. 1820.5
- B. 1840.5
- C. 1920.5
- D. 1940.5
- E. None of these

Answer – A. 1820.5

Explanation :

$$\text{Total amount} = 500 \times (1 + 10/100)^3 + 500 \times (1 + 10/100)^2 + 500 \times (1 + 10/100) = 1820.5$$

Therefore, the amount after 3 years = 1820.5

16. A sum of 3000 becomes 3600 in 3 years at 15 percent per annum. What will be the sum at the same rate after 9 years?

- A. 5124
- B. 5184
- C. 5186
- D. 5192
- E. None of these

Answer – B. 5184

Explanation :

$$3600 = 3000 \times (1 + 15/100)^3$$

$$(1 + 15/100)^3 = 6/5$$

$$\text{Amount} = 3000 \times [(1 + 15/100)^3]^3$$

$$\text{Amount} = 3000 \times (6/5)^3 = 5184$$

Therefore, the sum after nine years is 5184.

17. Arya borrows rupees 6000 from a bank at SI. After 4 years she paid Rs 2500 to the bank and at the end of 5 years from the date of borrowing he paid Rs 4560 to settle the account. Find the rate of interest (approx)

- A. 3.25%
- B. 3.50%
- C. 3.85%
- D. 4%
- E. None of these

Answer – C. 3.85%

Explanation :

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Total interest she paid = $6000 \times (r/100) \times 4 + 3500 \times (r/100) \times 1 = 275r$

total interest = $2500 + 4560 - 6000 = 1060$

so $1060 = 275r$, $r = 3.85\%$ approx

18. What amount would Rs.2560 fetch if it is lent at 8% SI for 15 years?

- A. Rs.3072
- B. Rs.4632
- C. Rs.5072
- D. Rs.5632
- E. None

Answer – D. Rs.5632

Explanation :

$SI = 2560 \times 8 \times 15 / 100$

3072

Amount = $2560 + 3072 = 5632$

19. Ajay lent Rs.8800 to be divided between his two sons aged 11 years and 13 years such that both of them would get an equal amount when lent at the rate of 10% SI when they attain 18 years of age. What is the share of elder in Rs.8800?

- A. 4125
- B. 4325
- C. 4475
- D. 4675
- E. None

Answer – D. 4675

Explanation :

$x + x \times 7 \times 10 / 100 = (8800 - x) + (8800 - x) \times 5 \times 10 / 100$

$x = 4125$

elder = $8800 - 4125 = 4675$

Therefore, the share of an elder is 4675.

20. SBI lent Rs. 10,000 to Deepak @7% SI for 10 years. Meanwhile, the government implemented a scheme due to which interest rate reduced by 2%. By this Deepak paid Rs.16,000 in total. Then after how many years after Deepak took the loan, the government introduced the scheme?

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- A. 3 Years
- B. 4 Years
- C. 5 years
- D. 6 years
- E. Cannot be determined

Answer – C. 5 years

Explanation :

$$6000 = 10000(7*x+5*(10-x))/100$$

$$x = 5$$

21. Five years ago, the average age of Rimi's age at that time was 12 years. Three years from now if the respective ratio between Rimi's age and Ruhi's age that time will be 5:3, what is Rimi's present age?

- A. 17 years
- B. 33 years
- C. 27 years
- D. 22 years

Answer – D. 22 years

Explanation :

The average age of Rimi's age that time and Ruhi's age that time = 12 years

Total age at that time = 24

Total age after 8 years = 24 + 16 = 40

Rimi's age after 8 years = 40 * (5/8) = 25

Rimi's present age = 25 – 3 = 22

Therefore, the present age of Rimi is = 22 years.

22. The present age of Kiran five times the age of Suji. After 10 years Kiran will be three times as old as Suji. Find out the present ages of Kiran and Suji?

- A. 25 years, 5 years
- B. 30 years, 6 years
- C. 35 years, 7 years
- D. 50 years, 10 years

Answer – D. 50 years, 10 years

Explanation :

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$$5x + 10/x + 10 = 3/1$$

$$x = 10$$

Kiran – 50 years, Suji – 10 years.

23. Six years from now, the average of Mano's age that time and Nita's age that time will be 29 years. Five years ago, if the ratio of Mano's age to the Nita's age that time was 11:7, what is Nita's present age ?

- A. 17 years
- B. 33 years
- C. 19 years
- D. 27 years

Answer – C. 19 years

Explanation :

$$\text{Total age after 6 years} = 2 \times 29 = 58$$

$$\text{Total age before 5 years} = 58 - 11 \times 2 = 36$$

$$\text{Nita's age before 5 years} = 36 * (7/18) = 14$$

$$\text{Nita's present age} = 14 + 5 = 19$$

Therefore, the present age of Nita is 19 years.

24. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

- A. 4 years
- B. 8 years
- C. 10 years
- D. None of these

Answer - A. 4 years

Explanation :

Let the ages of children be x , $(x + 3)$, $(x + 6)$, $(x + 9)$ and $(x + 12)$ years.

$$\text{Then, } x + (x + 3) + (x + 6) + (x + 9) + (x + 12) = 50$$

$$5x = 20$$

$$x = 4.$$

Therefore, Age of the youngest child = $x = 4$ years.

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25. Present ages of Sameer and Anand are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11 : 9 respectively. What is Anand's present age in years?

- A. 24
- B. 27
- C. 40
- D. Cannot be determined
- E. None of these

Answer - A. 24

Explanation :

Let the present ages of Sameer and Anand be $5x$ years and $4x$ years respectively.

Then, $5x + 3/4x + 3 = 11/9$

$9(5x + 3) = 11(4x + 3)$

$45x + 27 = 44x + 33$

$45x - 44x = 33 - 27$

$x = 6.$

Therefore, Anand's present age = $4x = 24$ years.

26. James' father was 30 years old when he was born. His mother's age was 24 when his sister who is 5 years younger to him, was born. What is the difference between the age of James' father and mother?

- A. 8
- B. 10
- C. 6
- D. 11
- E. 9

Answer – D. 11

Explanation :

James' age = $F - 30$

sister's age = $F - 35$

$M = 24 + \text{Sister's age}$

$M = 24 + F - 35$

$F - M = 11$

Therefore, the age difference between father and mother is 11 years.

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27. The respective ratio between the present age of Monika and Deepak is 5:x. Monika is 9 years younger than Prem. Prem's age after 9 years will be 33 years. The difference between Deepak's and Monika's age is same as the present age of Prem. What is the value of x?

- A. 18
- B. 10
- C. 16
- D. 11
- E. 13

Answer – E. 13

Explanation :

Prem's age after 9 years = 33 years

Prem's present age = $33 - 9 = 24$ years

Monika's present age = $24 - 9 = 15$ years

Deepak's present age = $15 + 24 = 39$ years

Ratio between Monika and Deepak = $15 : 39 = 5 : 13$

$x = 13$

Therefore, the value of the x is 13

28. Two different numbers when divided by same divisor leaves remainder 7 and 9 respectively. When their sum is divided by the same divisor remainder was 4. Find the divisor?

- A. 11
- B. 12
- C. 13
- D. 14
- E. None of these

Answer – B. 12

Explanation :

Let first number $N_1 = D \cdot a + 7$

and second number $N_2 = D \cdot b + 9$

$N_1 + N_2 = (a+b) \cdot D + 16$

Remainder is 4, so D will be 12

29. A number gets reduced to its two-third when 24 is subtracted from it. Find one-eighth of the number?

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- A. 7
- B. 8
- C. 9
- D. 10
- E. None of these

Answer – C. 9

Explanation :

$$a - 24 = 2a/3$$

we get $a = 72$

$$\text{so one-eighth of the number} = 72/8 = 9$$

30. A man can row 4.5 km/h in still water and he finds that it takes him twice as long to row up as to row down the river. The speed of the stream is

- A. 2.5 km/h
- B. 1.5 km/h
- C. 2 km/h
- D. 1.75 km/h

Answer: B. 1.5 km/h

Explanation :

Let speed of stream be S and x be upstream speed.

Then for downstream, $4.5 + S = D$

And for upstream , $4.5 - S = U$

So we get, $D + U = 9$

But, it takes him twice as long to row up as to row down the river.

$3U = 9$; $U = 3$. Thus, $4.5 - S = 3$

$S = 1.5$ km/h

Therefore, the speed of the stream is 1.5 km/h