

Accenture previous placement questions - 1

1. What is the next number of the following sequence

21,77,165,285,.....

Answer: 437

Explanation:

Look series

$$3 \times 7 = 21$$

$$7 \times 11 = 77$$

$$11 \times 15 = 165$$

$$15 \times 19 = 285$$

$$19 \times 23 = 437 \text{ ans}$$

$$T(n) = (4n - 1) \times (4n + 3)$$

Put value of n find any term.

2. A two-digit number is such that the product of the digits is 8. When 18 is added to the number, then the digits are reversed. The number is:

A. 18

B. 24

C. 42

D. 81

Answer: b

Explanation:

Just go in reverse order.

Check the options with subtracting 18 from each option for getting reverse number.

$$42 - 18 = 24 \text{ (which is in reverse).}$$

So answer is 24

3. Two guys work at some speed. After some time one guy realises he has done only half of the other guy completed which is equal to half of what is left. So how much faster than the other is this guy supposed to do to finish with the first.

Answer: twice

Explanation:

If x is the part of task this is completed then,

$$\text{1st has done work} = (1 - x)/4 \text{ and } \text{2nd has done work} = (1 - x)/2$$

So 2nd will have to increase his speed by 2 times.

4. We are given 100 pieces of a puzzle. If fixing two components together is counted as 1 move (a component can be one piece or an already fixed set of pieces), how many moves do we need to fix the entire puzzle.

Answer: 99

Explanation:

Fixing 2 components together = 1 move

98 components are left ,to again fix one of these to the other two = 1 move

97 comp left,so 97 more moves

Total = 1 + 1 + 97 = 99.

5. The time a passenger train takes to cross another freight train is twice when the passenger train crosses the freight train running in opposite directions. What is the ratio of their speeds?

Answer: 3 : 1

Explanation:

Speed of freight train = x

Speed of passenger train = y

Sum of their length = s

So time = $s/(x - y)$ when both are in same direction

Time = $s/(x + y)$ when opposite direction

From question $s/(x - y) = 2.s/(x + y)$ so solving this we get, $x/y = 3/1$.

So $x : y = 3 : 1$

6. At a recent birthday party there were four mothers and their children. Aged 1,2,3 and 4. from the clues below can you work out whose child is whose and their relevant ages?

- It was Jane's child's birthday party.
- Brian is not the oldest child.
- Sarah had Anne just over a year ago.
- Laura's Child will be next birthday.
- Daniel is older than Charlie is.
- Teresa's child is the oldest.
- Charlie is older than Laura's child.

Answer:

Explanation:

According to given points.

Anne is one yr old her mother is Sarah

Brian is 2 yr old his mom is Laura

Charlie is 3 yr old his mom is Jane

Daniel is 4 yr old his mom is Teresa.

And it's Charlie's birthday party.

7. Ajith was driving down the country side when he saw a farmer tending his pigs and ducks in his yard. Ajith asked the farmer how many of each he had. The farmer replied that there were 60 eyes and 86 feet between them. How many ducks and how many pigs were there ?

Answer: 17

Explanation:

Let the no of ducks be x and no of pigs be y .

Then, since there are 60 eyes in total and both ducks and pigs have 2 eyes we have $2x + 2y = 60$ - - - (1)

And total number of legs are 86, ducks have 2 legs while a pig has four so $2x + 4y = 86$ - - - (2)

Subtracting (1) from (2), we get

$$2y = 26. \text{ ie. } y = 13$$

Putting value in - - - (1),

We get $x = 17$

8. A supportive young hare and tortoise raced in opposite directions around a circular track that was 100 yards in diameter. They started at the same spot, but the hare did not move until the tortoise had a start of one eighth of the distance (that is, the circumference of the circle). The hare held such a poor opinion of the other's racing ability that he sauntered along, nibbling the grass until he met the tortoise. At this point the hare had gone one sixth of the distance. How many times faster than he went before must the hare now run in order to win the race ?

Answer: more than 5 times

Explanation:

The hare and the tortoise are at the same point when hare have to cover $5/6$ of the distance and tortoise have to cover $1/6$ of the distance to complete the race.

If x is the speed of tortoise then it'll take $1/(6x)$ time to finish.

So, hare will have to run more then 5 times the speed of tortoise to win the race.

9. Three times the first of three consecutive odd integers is 3 more than twice the third. The third integer is:

A. 9

B. 11

C. 13

D. 15

Answer: D

Explanation:

Let numbers are $n, n + 2, n + 4$

$$\text{Now } 3n = 2(n + 4) + 3$$

$$3n - 2n = 11$$

So

$N = 11$ then consecutive odd numbers are 11, 13, 15

10. A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he

is assisted by B and C on every third day?

- A. 12 days
- B. 15 days
- C. 16 days
- D. 18 days

Explanation:

Work done in 3 days = $(\frac{3}{20}) + (\frac{1}{30}) + (\frac{1}{60}) = \frac{1}{5}$

Remaining work = $\frac{4}{5}$

If $\frac{1}{5}$ work is done in 3 days then,

$\frac{4}{5}$ work is done in $(3 \times 5 \times 4)/5 = 12$ days

Total no. of days will become $12+3=15$ days for the complete work to be done

11. There are two bags A and B. A contains 6 red flowers and 3 pink flowers. where as bag B contains 2 red flowers and 7 pink flowers. One flower is chosen from a bag randomly. What is the probability that the flower chosen is pink?

- a. $\frac{4}{9}$
- b. $\frac{1}{3}$
- c. $\frac{5}{4}$
- d. $\frac{5}{9}$

Answer : d

Explanation:

Bag A 6 red + 3 pink

Bag B 2 red + 7 pink

Probability of picking 1 pink from bag A is $\frac{3}{9}$

Probability of picking 1 pink from bag B is $\frac{7}{9}$

Total = $\frac{3}{9} + \frac{7}{9} = \frac{10}{9}$

And probability of selecting a bag is $\frac{1}{2}$

So finally probability of choosing a pink flower = $\frac{1}{2}(\frac{10}{9}) = \frac{5}{9}$

12. The sum of a number and its square is 1406. What is the number?

- 1) 38
- 2) 39
- 3) 37
- 4) 29

Answer: 3

Explanation:

By option Verification $37 + 37 \times 37 = 1406$

13. How many 4-letter words with or without meaning, can be formed out of the letters of the word, 'LOGARITHMS',

if repetition of letters is not allowed?

- A. 40
- B. 400
- C. 5040
- D. 2520

Answer: C. 5040

Explanation:

The Word LOGARITHMS is contain 10 letters.

To find how many 4 letter word we can find from that = $10 \times 9 \times 8 \times 7 = 5040$.

14. At 6'o a clock ticks 6 times. The time between first and last ticks is 30 seconds. How long does it tick at 12'o clock

Answer: 66

Explanation:

For ticking 6 times, there are 5 intervals.

Each interval has time duration of $30/5 = 6$ secs

At 12 o'clock, there are 11 intervals,

So total time for 11 intervals = $11 \times 6 = 66$ secs.

15. A man travelled from the village to the post-office at the rate of 25 kmph and walked back at the rate of 4 kmph. If the whole journey took 5 hours 48 minutes, find the distance of the post-office from the village

Answer: 20 km

Explanation:

Average speed = $(2 \times a \times b)/(a + b)$ here $a = 25$ $b = 4$

Average speed = $2 \times 25 \times 4/(25 + 4) = 200/29$ kmph.

Distance covered in 5 hours 48 minutes = Speed $\times$ time

Distance = $(200/29) \times (29/5) = 40$ kms

Distance covered in 5 hours 48 minutes = 40 kms

Distance of the post office from the village = $(40/2) = 20$ km.

16. One year payment to the servant is Rs. 200 plus one shirt. The servant leaves after 9 months and receives Rs. 120 and a shirt. Then find the price of the shirt.

Answer: 120

Explanation:

12 months == Rs 200 + shirt --(1)

9 months == Rs 120 + shirt --(2)

After subtracting equation (2) from (1) we get, (shirt is cancelled)

3 months = Rs 80

12 months = $(80 \times 12)/3 = 320$

Hence from equation (1) we get $320 = 200 + \text{shirt}$

Therefore shirt = 120 Rs/-

17. In a class there are 45 pupil, out of them 12 are in debate only and 22 in singing only. Then how many in both?

Answer: 11

Explanation: Total pupil = 45

Debate + Singing = $12 + 22 = 34$

The intersection for two = $45 - 12 - 22 = 11$ play both games.

18. Silu and Meenu were walking on the road.

Silu said, "I weigh 51 Kgs. How much do you weigh?"

Meenu replied that she wouldn't reveal her weight directly as she is overweight.

But she said, "I weigh 29 Kgs plus half of my weight." How much does Meenu weigh?

Answer: 58

Explanation:

It is given that Meenu weighs 29 Kgs plus half of her own weight.

It means that 29 Kgs is the other half. So she weighs 58 Kgs.

Solving mathematically, let's assume that her weight is A Kgs.

$$A = 29 + A/2$$

$$2 \times A = 58 + A$$

$$A = 58 \text{ Kgs.}$$

19. What is the 56743rd term in the series 1234567891011121314.....?

Option

a) 1

b) 3

c) 7

d) 5

Answer: C

Explanation:

1 to 9 = 9 no.s 1 digit each no.

9 to 99 = 90 no.s 2 digit each, Total digit = $90 \times 2 = 180$ terms

99 to 999 = 900 no.s 3 digit each, total digit = $900 \times 3 = 2700$

999 to 9999 = 9000 no.s 4 digit each, total digit = $9000 \times 4 = 36,000$

Till Now 999, we have = $9 + 180 + 2700 = 2889$ digits

Upto 9999 we have = $2889 + 36000 = 38889$ digits

$$56743 - 38889 = 17854$$

After 9999 each no. has 5 digit

So $17854/5 = 3570$ with remainder 4.

3570th no after 9999 = 9999 + 3570 = 13569

Next term = 13570.

4th digit = 7 so answer = 7

20. A cycled from P to Q at 10 kmph and returned at the rate of 9 kmph. B cycled both ways at 12 kmph. In the whole journey B took 10 minutes less than A. Find the distance between P and Q.

Answer: 3.75 km

Explanation:

Let the distance between P and Q = d km

A - time = $d/10 + d/9 = 19d/90$ hours

B - time = $2d/12 = d/6$ hours

10 minutes = $1/6$ hours

Thus $19d/90 - d/6 = 1/6$

$(19d - 15d)/90 = 1/6$

$4d/90 = 1/6$

thus $d = 15/4$ km = 3.75 km

21. A two-digit number is such that the product of the digits is 8. When 18 is added to the number, then the digits are reversed. The number is:

A. 18

B. 24

C. 42

D. 81

Answer:

Explanation:

Just go in reverse order.

Check the options with subtracting 18 from each option for getting reverse number.

$42 - 18 = 24$ (which is in reverse).

So answer is 42.