IndiaBIX Online Test

Aptitude Test 2

Aptitude **Result & Statistics**

1. In a regular week, there are 5 working days and for each day, the working hours are 8. A man gets Rs. 2.40 per hour for regular work and Rs. 3.20 per hours for overtime. If he earns Rs. 432 in 4 weeks, then how many hours does he work for ?

A. 160 B. 175 ✓

C. 180 D. 195

Answer: Option **B**

Explanation:

Suppose the man works overtime for x hours.

Now, working hours in 4 weeks = (5 x 8 x 4) = 160.

$\therefore$ 160 x 2.40 + x x 3.20 = 432

$\Rightarrow$ 3.20x = 432 - 384 = 48

$\Rightarrow$ x = 15.

Hence, total hours of work = (160 + 15) = 175.

Learn more problems on : Simplification

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2. $\left(\frac{625}{11}\right)^{14}\times\left(\frac{11}{25}\right)^{11}\times 196$ is equal to:

A. 5 ✓ B. 6

C. 8 D. 11

Answer: Option **A**

Explanation:

Given Expression $=\frac{25}{11}^{14}\times\frac{11}{5}^{11}\times 14 = 5$.

Learn more problems on : Square Root and Cube Root

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Direction (for Q.No. 3):

Each of the questions given below consists of a question followed by three statements. You have to study the question and the statements and decide which of the statement(s) is/are necessary to answer the question.

3. In a cricket team, the average age of eleven players in 28 years. What is the age of the captain?

I. The captain is eleven years older than the youngest player.

II. The average age of 10 players, other than the captain is 27.3 years.

Marks : 15/20

Total number of questions	:	**20**
Number of answered questions	:	**15**
Number of unanswered questions	:	**5**

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III. Leaving aside the captain and the youngest player, the average ages of three groups of three players each are 25 years, 28 years and 30 years respectively.

A. Any two of the three
B. All I, II and III
C. II only or I and III only ✓
D. II and III only
E. None of these

Answer: Option **C**

Explanation:

Total age of 11 players = (28 x 11) years = 308 years.

I. C = Y + 11 $\Rightarrow$ C - Y = 11 .... (i)

II. Total age of 10 players (excluding captain) = (27.3 x 10) years = 273 years.

$\therefore$ Age of captain = (308 - 273) years = 35 years.

Thus, C = 35. .... (ii)

From (i) and (ii), we get Y = 24

III. Total age of 9 players = [(25 x 3) + (28 x 3) + (30 x 3)] years = 249 years.

$\therefore$ C + Y = (308 - 249) = 59 .... (iii)

From (i) and (iii), we get C = 35.

Thus, II alone gives the answer.

Also, I and III together give the answer.

$\therefore$ Correct answer is (C).

Learn more problems on : Average

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4. In a two-digit, if it is known that its unit's digit exceeds its ten's digit by 2 and that the product of the given number and the sum of its digits is equal to 144, then the number is:

A. 24 ✓
B. 26
C. 42
D. 46

Answer: Option **A**

Explanation:

Let the ten's digit be x.

Then, unit's digit = $x + 2$.

Number = $10x + (x + 2) = 11x + 2$.

Sum of digits = $x + (x + 2) = 2x + 2$.

$\therefore$ $(11x + 2)(2x + 2) = 144$

$\Rightarrow 22x^2 + 26x - 140 = 0$

$\Rightarrow 11x^2 + 13x - 70 = 0$

$\Rightarrow (x - 2)(11x + 35) = 0$

$\Rightarrow x = 2$.

Hence, required number = $11x + 2 = 24$.

Learn more problems on : Problems on Numbers

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5. Find a positive number which when increased by 17 is equal to 60 times the reciprocal of the number.

A. 3 ✓ B. 10

C. 17 D. 20

Answer: Option **A**

Explanation:

Let the number be x.

Then, $x + 17 = \frac{60}{x}$

$\Rightarrow x^2 + 17x - 60 = 0$

$\Rightarrow (x + 20)(x - 3) = 0$

$\Rightarrow x = 3.$

Learn more problems on : Problems on Numbers

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6. Ayesha's father was 38 years of age when she was born while her mother was 36 years old when her brother four years younger to her was born. What is the difference between the ages of her parents?

A. 2 years B. 4 years

C. 6 years ✓ D. 8 years

Answer: Option **C**

Explanation:

Mother's age when Ayesha's brother was born = 36 years.

Father's age when Ayesha's brother was born = (38 + 4) years = 42 years.

∴ Required difference = (42 - 36) years = 6 years.

Learn more problems on : Problems on Ages

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Direction (for Q.No. 7):

Each of the questions given below consists of a question followed by three statements. You have to study the question and the statements and decide which of the statement(s) is/are necessary to answer the question.

7. What is the present age of Tanya?

I. The ratio between the present ages of Tanya and her brother Rahul is 3 : 4 respectively.

II. After 5 years the ratio between the ages of Tanya and Rahul will be 4 : 5.

III. Rahul is 5 years older than Tanya.

A. I and II only

B. II and III only

C. I and III only

D. All I, II and III

E. Any two of the three ✓

Answer: Option **E**

Explanation:

I. Let the present ages of Tanya and Rahul be $3x$ years and $4x$ years.

II. After 5 years, (Tanya's age) : (Rahul's age) = 4 : 5.

III. (Rahul's age) = (Tanya's age) + 5.

From I and II, we get $\frac{3x + 5}{4x + 5} = \frac{4}{5}$. This gives x.

∴ Tanya's age = $3x$ can be found. Thus, I and II give the answer.

From I and III, we get $4x = 3x + 5$. This gives x.

∴ Tanya's age = $3x$ can be found. Thus, I and III give the answer.

From III : Let Tanya's present age be t years.

Then Rahul's present age = $(t + 5)$ years.

Thus, from II and III, we get : $\frac{t}{t + 5} = \frac{4}{5}$. This gives t.

Thus, II and III give the answer.

∴ Correct answer is (E).

Learn more problems on : Problems on Ages

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8. In an election between two candidates, one got 55% of the total valid votes, 20% of the votes were invalid. If the total number of votes was 7500, the number of valid votes that the other candidate got, was:

A. 2700 ✓ B. 2900

C. 3000 D. 3100

Answer: Option **A**

Explanation:

Number of valid votes = 80% of 7500 = 6000.

∴ Valid votes polled by other candidate = 45% of 6000

$= \left(\frac{45}{100} \times 6000\right) = 2700.$

Learn more problems on : Percentage

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9. A trader mixes 26 kg of rice at Rs. 20 per kg with 30 kg of rice of other variety at Rs. 36 per kg and sells the mixture at Rs. 30 per kg. His profit percent is:

A. No profit, no loss B. 5% ✓

C. 8% D. 10%

E. None of these

Answer: Option **B**

Explanation:

C.P. of 56 kg rice = Rs. (26 x 20 + 30 x 36) = Rs. (520 + 1080) = Rs. 1600.

S.P. of 56 kg rice = Rs. (56 x 30) = Rs. 1680.

∴ Gain $= \left(\frac{80}{1600} \times 100\right)\% = 5\%.$

Learn more problems on : Profit and Loss

Discuss about this problem : Discuss in Forum

Direction (for Q.No. 10):

Each of the questions given below consists of a statement and / or a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statement(s) is / are sufficient to answer the given question. Read the both statements and

- Give answer (A) if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- Give answer (B) if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- Give answer (C) if the data either in Statement I or in Statement II alone are sufficient to answer the question.
- Give answer (D) if the data even in both Statements I and II together are not sufficient to answer the question.
- Give answer(E) if the data in both Statements I and II together are necessary to answer the question.

10. A man mixes two types of rice (X and Y) and sells the mixture at the rate of Rs. 17 per kg. Find his profit percentage.
    I. The rate of X is Rs. 20 per kg.
    II. The rate of Y is Rs. 13 per kg.

A. I alone sufficient while II alone not sufficient to answer

B. II alone sufficient while I alone not sufficient to answer

C. Either I or II alone sufficient to answer

D. Both I and II are not sufficient to answer

E. Both I and II are necessary to answer

Answer: Option **D**

Explanation:

The ratio, in which X and Y are mixed, is not given.

So, both I and II together cannot give the answer.

∴ Correct answer is (D).

Learn more problems on : Profit and Loss

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11. An industrial loom weaves 0.128 metres of cloth every second. Approximately, how many seconds will it take for the loom to weave 25 metres of cloth?

A. 178

B. 195

C. 204

D. 488

Answer: Option **B**

Explanation:

Le the required time be x seconds.

More metres, More time (Direct Proportion)

∴ 0.128 : 25 :: 1 : x $\Leftrightarrow$ $0.128x = 25 \times 1$

$x = \frac{25}{0.128} = \frac{25 \times 1000}{128}$

$\Rightarrow x = 195.31$.

∴ Required time = 195 sec (approximately).

Learn more problems on : Chain Rule

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12. A takes twice as much time as B or thrice as much time as C to finish a piece of work. Working together, they can finish the work in 2 days. B can do the work alone in:

A. 4 days
B. 6 days
C. 8 days
D. 12 days

Answer: Option **B**

Explanation:

Suppose A, B and C take x, $\frac{x}{2}$ and $\frac{x}{3}$ days respectively to finish the work.

Then, $\left(\frac{1}{x}+\frac{2}{x}+\frac{3}{x}\right)=\frac{1}{2}$

$\Rightarrow \frac{6}{x}=\frac{1}{2}$

$\Rightarrow x = 12.$

So, B takes (12/2) = 6 days to finish the work.

Learn more problems on : Time and Work

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13. If log 27 = 1.431, then the value of log 9 is:

A. 0.934
B. 0.945
C. 0.954
D. 0.958

Answer: Option **C**

Explanation:

log 27 = 1.431

$\Rightarrow$ log (3^3) = 1.431

$\Rightarrow$ 3 log 3 = 1.431

$\Rightarrow$ log 3 = 0.477

$\therefore$ log 9 = log(3^2) = 2 log 3 = (2 x 0.477) = 0.954.

Learn more problems on : Logarithm

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14. If $\log_{10} 2 = 0.3010$, the value of $\log_{10} 80$ is:

A. 1.6020
B. 1.9030
C. 3.9030
D. None of these

Answer: Option **B**

Explanation:

$\log_{10} 80 = \log_{10} (8 \times 10)$
$= \log_{10} 8 + \log_{10} 10$
$= \log_{10} (2^3) + 1$
$= 3 \log_{10} 2 + 1$
$= (3 \times 0.3010) + 1$
$= 1.9030.$

Learn more problems on : Logarithm

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15. The ratio between the length and the breadth of a rectangular park is 3 : 2. If a man cycling along the boundary of the park at the speed of 12 km/hr completes one round in 8 minutes, then the area of the park (in sq. m) is:

A. 15360 B. 153600

C. 30720 D. 307200

Answer: Option **B**

Explanation:

Perimeter = Distance covered in 8 min. $= \left(\frac{12000}{60} \times 8\right)$ m = 1600 m.

Let length = 3x metres and breadth = 2x metres.

Then, 2(3x + 2x) = 1600 or x = 160.

∴ Length = 480 m and Breadth = 320 m.

∴ Area = (480 x 320) m^2 = 153600 m^2.

Learn more problems on : Area

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16. The slant height of a right circular cone is 10 m and its height is 8 m. Find the area of its curved surface.

A. $30\pi\ m^2$ B. $40\pi\ m^2$

C. $60\pi\ m^2$ D. $80\pi\ m^2$

Answer: Option **C**

Explanation:

l = 10 m,

h = 8 m.

So, $r = l^2 - h^2 = (10)^2 - 8^2$ = 6 m.

∴ Curved surface area = πrl = (π x 6 x 10) m^2 = $60\pi\ m^2$.

Learn more problems on : Volume and Surface Area

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17. A man wants to sell his scooter. There are two offers, one at Rs. 12,000 cash and the other a credit of Rs. 12,880 to be paid after 8 months, money being at 18% per annum. Which is the better offer?

A. Rs. 12,000 in cash B. s. 12,880 at credit

C. Both are equally good D. [NIL]

Answer: Option **A**

Explanation:

P.W. of Rs. 12,880 due 8 months hence $= \text{Rs.}\left[\frac{12880 \times 100}{100 + \left(18 \times \frac{8}{12}\right)}\right]$

$= \text{Rs.}\left(\frac{12880 \times 100}{112}\right)$

= Rs. 11500.

Learn more problems on : True Discount

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18. The banker's discount of a certain sum of money is Rs. 72 and the true discount on the same sum for the same time is Rs. 60. The sum due is:

A. Rs. 360 ✓ B. Rs. 432

C. Rs. 540 D. Rs. 1080

Answer: Option **A**

Explanation:

$$\text{Sum} = \frac{\text{B.D. x T.D.}}{\text{B.D. - T.D.}} = \text{Rs.}\left(\frac{72 \times 60}{72 - 60}\right) = \text{Rs.}\left(\frac{72 \times 60}{12}\right) = \text{Rs. } 360.$$

Learn more problems on : Banker's Discount

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19. A man standing at a point P is watching the top of a tower, which makes an angle of elevation of 30º with the man's eye. The man walks some distance towards the tower to watch its top and the angle of the elevation becomes 60º. What is the distance between the base of the tower and the point P?

A. 43 units B. 8 units

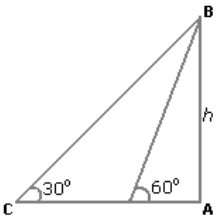
C. 12 units D. Data inadequate ✓

E. None of these

Answer: Option **D**

Explanation:

One of AB, AD and CD must have given.



So, the data is inadequate.

Learn more problems on : Height and Distance

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Direction (for Q.No. 20):

Insert the missing number.

20. 8, 7, 11, 12, 14, 17, 17, 22, (....)

A. 27 B. 20 ✓

C. 22 D. 24

Answer: Option **B**

Explanation:

There are two series (8, 11, 14, 17, 20) and (7, 12, 17, 22) increasing by 3 and 5 respectively.

Learn more problems on : Odd Man Out and Series

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