

Online Aptitude Test :: Aptitude Test - Random

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Marks : 14/20

Total number of questions : 20
Number of answered questions : 20
Number of unanswered questions : 0

Test Review : View answers and explanation for this test.

1. $-84 \times 29 + 365 = ?$

- A 2436
- B 2801
- C -2801
- D -2071 ✓
- E None of these

Your Answer: Option D

Correct Answer: Option D

Explanation:

$$\text{Given Exp.} = -84 \times (30 - 1) + 365$$

$$= -(84 \times 30) + 84 + 365$$

$$= -2520 + 449$$

$$= -2071$$

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2. The product of two numbers is 2028 and their H.C.F. is 13. The number of such pairs is:

- A 1
- B 2 ✓
- C 3
- D 4 ✗

Your Answer: Option D

Correct Answer: Option B

Explanation:

Let the numbers $13a$ and $13b$.

Then, $13a \times 13b = 2028$

$$\Rightarrow ab = 12.$$

Now, the co-primes with product 12 are (1, 12) and (3, 4).

[Note: Two integers a and b are said to be **coprime** or relatively prime if they have no common positive factor other than 1 or, equivalently, if their greatest common divisor is 1]

So, the required numbers are $(13 \times 1, 13 \times 12)$ and $(13 \times 3, 13 \times 4)$.

Clearly, there are 2 such pairs.

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3. The price of 10 chairs is equal to that of 4 tables. The price of 15 chairs and 2 tables together is Rs. 4000. The total price of 12 chairs and 3 tables is:

- A Rs. 3500
- B Rs. 3750
- C Rs. 3840
- D Rs. 3900 ✓

Your Answer: Option D

Correct Answer: Option **D**

Explanation:

Let the cost of a chair and that of a table be Rs. x and Rs. y respectively.

$$\text{Then, } 10x = 4y \text{ or } y = \frac{5}{2}x.$$

$$\therefore 15x + 2y = 4000$$

$$\Rightarrow 15x + 2 \times \frac{5}{2}x = 4000$$

$$\Rightarrow 20x = 4000$$

$$\therefore x = 200.$$

$$\text{So, } y = \left(\frac{5}{2} \times 200 \right) = 500.$$

$$\text{Hence, the cost of 12 chairs and 3 tables} = 12x + 3y$$

$$= \text{Rs.} (2400 + 1500)$$

$$= \text{Rs.} 3900.$$

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[#]

4. The sum of the digits of a two-digit number is 15 and the difference between the digits is 3. What is the two-digit number?

A 69

B 78

C 96 X

D Cannot be determined ✓

E None of these

Your Answer: Option **D**

Correct Answer: Option **D**

Explanation:

Let the ten's digit be x and unit's digit be y .

Then, $x + y = 15$ and $x - y = 3$ or $y - x = 3$.

Solving $x + y = 15$ and $x - y = 3$, we get: $x = 9$, $y = 6$.

Solving $x + y = 15$ and $y - x = 3$, we get: $x = 6$, $y = 9$.

So, the number is either 96 or 69.

Hence, the number cannot be determined.

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[#]

5. $(256)^{0.16} \times (256)^{0.09} = ?$

A 4 ✓

B 16

C 64

D 256.25

Your Answer: Option A

Correct Answer: Option A

Explanation:

$$(256)^{0.16} \times (256)^{0.09} = (256)^{(0.16 + 0.09)}$$

$$= (256)^{0.25}$$

$$= (256)^{(25/100)}$$

$$= (256)^{(1/4)}$$

$$= (4^4)^{(1/4)}$$

$$= 4^{4(1/4)}$$

$$= 4^1$$

$$= 4$$

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[#]

6. Rajeev buys good worth Rs. 6650. He gets a rebate of 6% on it. After getting the rebate, he pays sales tax @ 10%. Find the amount he will have to pay for the goods.

(A) Rs. 6876.10 ✓

(B) Rs. 6999.20

(C) Rs. 6654

(D) Rs. 7000

Your Answer: Option **(A)**

Correct Answer: Option **(A)**

Explanation:

$$\text{Rebate} = 6\% \text{ of Rs. } 6650 = \text{Rs. } \left(\frac{6}{100} \times 6650 \right) = \text{Rs. } 399.$$

$$\text{Sales tax} = 10\% \text{ of Rs. } (6650 - 399) = \text{Rs. } \left(\frac{10}{100} \times 6251 \right) = \text{Rs. } 625.10$$

$$\therefore \text{Final amount} = \text{Rs. } (6251 + 625.10) = \text{Rs. } 6876.10$$

Video Explanation: <https://youtu.be/XuiggCTh3SU>

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[#]

7. A, B and C enter into a partnership in the ratio $\frac{7}{2} : \frac{4}{3} : \frac{6}{5}$. After 4 months, A increases his share 50%. If the total profit at the end of one year be Rs. 21,600, then B's share in the profit is:

(A) Rs. 2100

(B) Rs. 2400 ✗

(C) Rs. 3600

(D) Rs. 4000 ✓

Your Answer: Option **(B)**

Correct Answer: Option **(D)**

Explanation:

$$\text{Ratio of initial investments} = \left(\frac{7}{2} : \frac{4}{3} : \frac{6}{5} \right) = 105 : 40 : 36.$$

Let the initial investments be $105x$, $40x$ and $36x$.

$$\therefore A:B:C = \left(105x \times 4 + \frac{150}{100} \times 105x \times 8 \right) : (40x \times 12) : (36x \times 12)$$

$$= 1680x : 480x : 432x = 35 : 10 : 9.$$

$$\text{Hence, B's share} = \text{Rs. } \left(21600 \times \frac{10}{54} \right) = \text{Rs. } 4000.$$

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[#]

8. A is thrice as good workman as B and therefore is able to finish a job in 60 days less than B. Working together, they can do it in:

- ⓐ 20 days
- ⓑ $22\frac{1}{2}$ days ✓
- ⓒ 25 days
- ⓔ 30 days

Your Answer: Option ⓑ

Correct Answer: Option ⓑ

Explanation:

Ratio of times taken by A and B = 1 : 3.

The time difference is $(3 - 1)$ 2 days while B take 3 days and A takes 1 day.

If difference of time is 2 days, B takes 3 days.

If difference of time is 60 days, B takes $\left(\frac{3}{2} \times 60 \right)$ = 90 days.

So, A takes 30 days to do the work.

$$\text{A's 1 day's work} = \frac{1}{30}$$

$$B's \text{ 1 day's work} = \frac{1}{90}$$

$$(A + B)'s \text{ 1 day's work} = \left(\frac{1}{30} + \frac{1}{90} \right) = \frac{4}{90} = \frac{2}{45}$$

$\therefore A$ and B together can do the work in $\frac{45}{2} = 22\frac{1}{2}$ days.

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[#]

9. A 300 metre long train crosses a platform in 39 seconds while it crosses a signal pole in 18 seconds. What is the length of the platform?

- A 320 m
- B 350 m ✓
- C 650 m
- D Data inadequate

Your Answer: Option B

Correct Answer: Option B

Explanation:

$$\text{Speed} = \left(\frac{300}{18} \right) \text{m/sec} = \frac{50}{3} \text{ m/sec.}$$

Let the length of the platform be x metres.

$$\text{Then, } \left(\frac{x + 300}{39} \right) = \frac{50}{3}$$

$$\Rightarrow 3(x + 300) = 1950$$

$$\Rightarrow x = 350 \text{ m.}$$

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[#]

10. A train 360 m long is running at a speed of 45 km/hr. In what time will it pass a bridge 140 m long?

A 40 sec ✓

B 42 sec

C 45 sec

D 48 sec

Your Answer: Option **(A)**

Correct Answer: Option **(A)**

Explanation:

Formula for converting from km/hr to m/s: $X \text{ km/hr} = \left(X \times \frac{5}{18} \right) \text{ m/s.}$

Therefore, Speed = $\left(45 \times \frac{5}{18} \right) \text{ m/sec.} = \frac{25}{2} \text{ m/sec.}$

Total distance to be covered = $(360 + 140) \text{ m} = 500 \text{ m.}$

Formula for finding Time = $\left(\frac{\text{Distance}}{\text{Speed}} \right)$

\therefore Required time = $\left(\frac{500 \times 2}{25} \right) \text{ sec} = 40 \text{ sec.}$

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[#]

11. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

A 3 km/hr

B 5 km/hr

C 8 km/hr ✓

D 9 km/hr

Your Answer: Option **(D)**

Correct Answer: Option **(C)**

Explanation:

Speed in still water = $\frac{1}{2}(11 + 5)$ kmph = 8 kmph.

Video Explanation: https://youtu.be/KQX_mA3tcVA

Discuss about this problem : [Discuss in Forum](#)

Learn more problems on : [Boats and Streams](#)

[#]

12. A man takes twice as long to row a distance against the stream as to row the same distance in favour of the stream. The ratio of the speed of the boat (in still water) and the stream is:

- ⓐ 2 : 1
- ⓑ 3 : 1 ✓
- ⓒ 3 : 2
- ⓔ 4 : 3

Your Answer: Option ⓑ

Correct Answer: Option ⓑ

Explanation:

Let man's rate upstream be x kmph.

Then, his rate downstream = $2x$ kmph.

$$\begin{aligned} \therefore (\text{Speed in still water}) : (\text{Speed of stream}) &= \left(\frac{2x + x}{2} \right) : \left(\frac{2x - x}{2} \right) \\ &= \frac{3x}{2} : \frac{x}{2} \\ &= 3 : 1. \end{aligned}$$

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[#]

13. The percentage increase in the area of a rectangle, if each of its sides is increased by 20% is:

- ⓐ 40%

B 42% **C** 44% **D** 46%**Your Answer:** Option **(C)****Correct Answer:** Option **(C)****Explanation:**

Let original length = x metres and original breadth = y metres.

Original area = (xy) m².

$$\text{New length} = \left(\frac{120}{100}x \right) \text{m} = \left(\frac{6}{5}x \right) \text{m.}$$

$$\text{New breadth} = \left(\frac{120}{100}y \right) \text{m} = \left(\frac{6}{5}y \right) \text{m.}$$

$$\text{New Area} = \left(\frac{6}{5}x \times \frac{6}{5}y \right) \text{m}^2 = \left(\frac{36}{25}xy \right) \text{m}^2.$$

The difference between the original area = xy and new-area $36/25 xy$ is

$$= (36/25)xy - xy$$

$$= xy(36/25 - 1)$$

$$= xy(11/25) \text{ or } (11/25)xy$$

$$\therefore \text{Increase \%} = \left(\frac{11}{25}xy \times \frac{1}{xy} \times 100 \right)\% = 44\%.$$

Video Explanation: <https://youtu.be/I3jLjLPn1W4>

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[#]

14. How many days are there in x weeks x days?

 A $7x^2$ **B** $8x$

C 14 *x* **D** 7**Your Answer:** Option **B****Correct Answer:** Option **B****Explanation:**
 $x \text{ weeks } x \text{ days} = (7x + x) \text{ days} = 8x \text{ days.}$
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[#]

15. The angle between the minute hand and the hour hand of a clock when the time is 4.20, is:

 A 0° **B** 10° *✓* **C** 5° *x* **D** 20°**Your Answer:** Option **C****Correct Answer:** Option **B****Explanation:**

$$\text{Angle traced by hour hand in } \frac{13}{3} \text{ hrs} = \left(\frac{360}{12} \times \frac{13}{3} \right)^\circ = 130^\circ.$$

$$\text{Angle traced by min. hand in 20 min.} = \left(\frac{360}{60} \times 20 \right)^\circ = 120^\circ.$$

$$\therefore \text{Required angle} = (130 - 120)^\circ = 10^\circ.$$

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[#]

16. Which is better investment: 11% stock at 143 or $9\frac{3}{4}\%$ stock at 117?

- A** 11% stock at 143 ×
- B** $9\frac{3}{4}\%$ stock at 117 ✓
- C** Both are equally good
- D** Cannot be compared, as the total amount of investment is not given.

Your Answer: Option **(A)**

Correct Answer: Option **(B)**

Explanation:

Let investment in each case be Rs. (143×117) .

$$\text{Income in 1^{st} case} = \text{Rs.} \left(\frac{11}{143} \times 143 \times 117 \right) = \text{Rs.} 1287.$$

$$\text{Income in 2^{nd} case} = \text{Rs.} \left(\frac{39}{4 \times 117} \times 143 \times 117 \right) = \text{Rs.} 1394.25$$

Clearly, $9\frac{3}{4}\%$ stock at 117 is better.

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[#]

17. Goods were bought for Rs. 600 and sold the same for Rs. 688.50 at a credit of 9 months and thus gaining 2% The rate of interest per annum is:

- A** $16\frac{2}{3}\%$ ✓
- B** $14\frac{1}{2}\%$
- C** $13\frac{1}{3}\%$
- D** 15%

Your Answer: Option **(A)**

Correct Answer: Option **(A)**

Explanation:

$$\text{S.P.} = 102\% \text{ of Rs. } 600 = \left(\frac{102}{100} \times 600 \right) = \text{Rs. } 612.$$

Now, P.W. = Rs. 612 and sum = Rs. 688.50.

$$\therefore \text{T.D.} = \text{Rs. } (688.50 - 612) = \text{Rs. } 76.50.$$

Thus, S.I. on Rs. 612 for 9 months is Rs. 76.50.

$$\therefore \text{Rate} = \left(\frac{100 \times 76.50}{612 \times \frac{3}{4}} \right)\% = 16\frac{2}{3}\%$$

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Learn more problems on : [True Discount](#)

[#]

18. Rs. 20 is the true discount on Rs. 260 due after a certain time. What will be the true discount on the same sum due after half of the former time, the rate of interest being the same?

- A) Rs. 10
- B) Rs. 10.40 ✓
- C) Rs. 15.20
- D) Rs. 13

Your Answer: Option B

Correct Answer: Option B

Explanation:

S.I. on Rs. (260 - 20) for a given time = Rs. 20.

S.I. on Rs. 240 for half the time = Rs. 10.

T.D. on Rs. 250 = Rs. 10.

$$\therefore \text{T.D. on Rs. } 260 = \text{Rs. } \left(\frac{10}{250} \times 260 \right) = \text{Rs. } 10.40$$

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[#]

19. The interest on Rs. 750 for 2 years is the same as the true discount on Rs. 960 due 2 years hence.

If the rate of interest is the same in both cases, it is:

- A 12%
- B 14% 
- C 15%
- D $16\frac{2}{3}\%$

Your Answer: Option B

Correct Answer: Option B

Explanation:

S.I. on Rs. 750 = T.D. on Rs. 960.

This means P.W. of Rs. 960 due 2 years hence is Rs. 750.

\therefore T.D. = Rs. (960 - 750) = Rs. 210.

Thus, S.I. on R.s 750 for 2 years is Rs. 210.

$$\therefore \text{Rate} = \left(\frac{100 \times 210}{750 \times 2} \right)\% = 14\%$$

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Learn more problems on : [True Discount](#)

[#]

20. The present worth of a certain bill due sometime hence is Rs. 800 and the true discount is Rs. 36.

The banker's discount is:

- A Rs. 37
- B Rs. 37.62 
- C Rs. 34.38 
- D Rs. 38.98

Your Answer: Option C

Correct Answer: Option B

Explanation:

$$\text{B.G.} = \frac{(\text{T.D.})^2}{\text{P.W.}} = \text{Rs.} \left(\frac{36 \times 36}{800} \right) = \text{Rs.} 1.62$$

$$\therefore \text{B.D.} = (\text{T.D.} + \text{B.G.}) = \text{Rs.} (36 + 1.62) = \text{Rs.} 37.62$$

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[#]

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