Talent Battle's Daily Dose of Aptitude-09-07-2019

1.The average of runs of a cricket player of 10 innings was 32. How many runs must he make in his next innings so as to increase his average of runs by 4 ?

A) 76

B) 79

C) 85

D) 87

2. If the radius of a circle is decreased by 50%, find the percentage decrease in its area.

A) 55%

B) 65%

C) 75%

D) 85%

3. (51 + 52 + 53 + ...+100) - (1 + 2 + 3 + ... + 50) is equal to:

A)2786

B)4065

C)3156

D)3775

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

A) 22%

B) 33%

C) 44%

D) 55%

5. A man can row 6 kmph in still water. When the river is running at 1.2 kmph, it takes him 1 hour to row to a place and back. What is the total distance traveled by the man ?

A) 4.58 kms

B) 6.35 kms

C) 5.76 kms

D) 5.24 kms

6. Selling price of a cellphone is increased by 20%. For this sale is decreased by 30%. Find the effect of total sales?
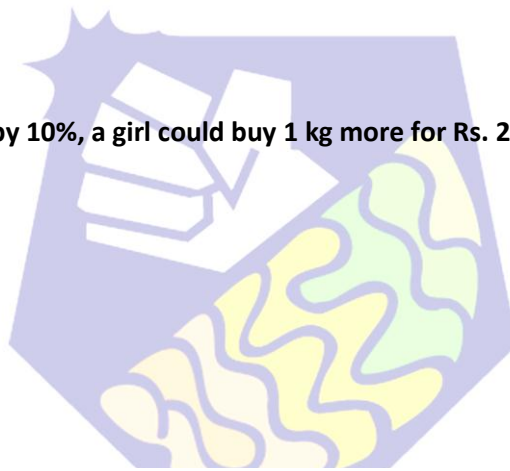
A) 16%

B) 14.5%

C) 12%

D) 10.5%

7. A sum of Rs. 2600 is invested at two different rates of interest. The difference between the simple interests got after 4 years is Rs 402.80 at these two rates, what is the difference between the rates of interest?

A) 1.58

B) 2.63

C) 3.87

D) 4.02

8. When the price of rice decrease by 10%, a girl could buy 1 kg more for Rs. 270. Then, the original price of the rice per kg is

A) Rs. 36

B) Rs. 30

C) Rs. 28

D) Rs. 40

9. Two numbers are such that the sum of twice the first number and thrice the second number is 36 and the sum of thrice the first number and twice the second number is 39. Find the difference between the numbers?

A) 15

B) 3

C) 9

D) 6

10. A 150 m long train crosses another 210 m long train running in the opposite direction in 10.8 seconds. If the shorter train crosses a pole in 12 seconds, what is the speed of longer train ?

A) 75 kmph

B) 80 kmph

C) 54 kmph

D) 45 kmph

Answers and explaination:

Answer 1 : A)

Explanation:

Average = total runs / no.of innings = 32

So, total = Average x no.of innings = 32 x 10 = 320.

Now increase in avg = 4 runs. So, new avg = 32+4 = 36 runs

Total runs = new avg x new no. of innings = 36 x 11 = 396

Runs made in the 11th inning = 396 - 320 = 76

Answer 2 : C

Explanation:

Let original radius = R.

New radius = (50 / 100)R= (50 / 100)R

Original area =R/2 and new area = πR^2

$3\pi R^4/4 *1 /\pi Rr^2*100$

Decrease in area = $\pi(R / 2)^2 = \pi R^2/4$ = 75%

Ans 3: D

Expaination:

 = (1 + 2 + 3 + ... + 100) - (1 + 2 + 3 + ... + 50)

 = It is in the form of n(n+1) / 2 series summation

= n1 = 100 , n2 = 50

=[100(100+1) / 2] – [50(50+1) / 2]

 = (5050 - 1275) = 3775

Answer 4: C

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

Original area = xy sq.m

Increased length = 120 / 100 and Increased breadth = 120 / 100

New area = (120/100)x*(120/100)y=(36/25)xy m^2

The difference between the Original area and New area is:

(36/25)xy−xy

(11/25)xy Increase % ={(11/25xy)/xy}*100= 44%

Answer 5: C

Explanation:

Speed in still water = 6 kmph

Stream speed = 1.2 kmph

Downstream = 7.2 kmph

Up Stream = 4.8 kmph

x/7.2 + x/4.8 = 1

x = 2.88

Total Distance = 2.88 x 2 = 5.76 kms

Answer 6: A

Explanation:

Let cost of each cell phone = Rs.100 & Sale = 100 phones.

Money receipt = Rs.(100 x 100) = Rs.10,000

New cost per cellphone = Rs.120 and New sale = 70 phones

New Money Receipt = Rs.(70 x 120) = Rs.8400

Then the effect of sales = decrease in money receipt =

1600 / 10000 x 100 = 16%.

Answer 7: C

Explanation:

Let the two different rates of interests be r1 and r2 respectively.

From the given data,

2600 x 4 x (r1 − r2)/100 = 402.80

(r1 − r2) = 402.80/104 = 3.87

Hence, the difference in the interest rates = 3.87

Answer 8: B

Explanation:

From the given data,

When the price of rice is decreased by 10%, the value of Rs. 270 would become

270 x 100/90 = 300

Now, the value 270 becomes 300

And given, the girl could buy 1 kg extra for that value

Change in value = 300 - 270 = Rs. 30

Therefore, 1 kg extra rice she can get for Rs. 30

=> The original price of rice = Rs. 30/kg.

As she gets only 9 kgs for Rs. 270 before 10% discount, now after discount she gets 10 kgs instead of 9 kgs for Rs. 270.

Answer 9 : A Explanation:

Let the required two numbers be a, b

From the given data,

2a + 3b = 36 .....(1)

3a + 2b = 39 .....(2)

Now, by solving 1 and 2 eqnts, we get

5a = 45

a = 9 ....(3)

Put (3) in (1), we get

2(9) + 3b = 36

=> 18 + 3b = 36

3b = 36 - 18

=> b = 18/3 = 6

Required, difference between the numbers = a + b = 9 + 6 = 15.

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Answer 10 : A

Explanation:

Total distance = 150 + 210 = 360 mts

Time taken to cross each other when moving in opposite direction = 10.8 sec

Relative speed of trains = (360/10.8) x 18/5 = 3600/30 = 120 kmph

Speed of shorter train = (150/12) x 18/5 = 45 kmph

Hence, speed of longer train = 120 - 45 = 75 kmph.