Daily Dose of Aptitude-06-07-2019

1. In how many different ways can the letters of the word 'LEADING' be arranged in such a way that the vowels always come together?

a. 720
b. 520
c. 700
d. 750

2. A clock is set right at 5 a.m. The clock loses 16 minutes in 24 hours.What will be the true time when the clock indicates 10 p.m. on 4th day?

a. 11pm
b. 12pm
c. 1pm
d. 2pm

3. A parallelogram has sides 30m and 14m and one of its diagonals is 40m long. Then its area is

a. 136
b. 236
c. 336
d. 436

4. A rectangular courtyard 3.78 meters long 5.25 meters wide is to be paved exactly with square tiles, all of the same size. what is the largest size of the tile which could be used for the purpose?

a. 14 cms
b. 21 cms
c. 42 cms
d. None of these

5. The speed of a car increases by 2 kms after every one hour. If the distance travelling in the first one hour was 35 kms. what was the total distance travelled in 12 hours?

a. 456 kms
b. 482 kms
c. 552 kms
d. 556 km

6. If the cost price of 12 pens is equal to the selling price of 8 pens, the gain percent is ?

a. 12%
b. 30%
c. 50%
d. 60%

7. P can complete a work in 12 days working 8 hours a day.Q can complete the same work in 8 days working 10 hours a day. If both p and Q work together,working 8 hours a day,in how many days can they complete the work?

a. 60/11
b. 61/11
c. 71/11
d. 72/11

8. A pupil's marks were wrongly entered as 83 instead of 63. Due to that the average marks for the class got increased by half. The number of pupils in the class is :

a. 45
b. 40
c. 39
d. 37

9. Find the angle between the hour hand and the minute hand of a clock when the time is 3.25

a. 47.5 degrees
b. 57.5 degrees
c. 45.5 degrees
d. 55.5 degrees

10. Two bus tickets from city A to B and three tickets from city A to C cost Rs. 77 but three tickets from city A to B and two tickets from city A to C cost Rs. 73. What are the fares for cities B and C from A ?

a. Rs. 4, Rs. 23
b. Rs. 13, Rs. 17
c. Rs. 15, Rs. 14
d. Rs. 17, Rs. 13

Answers and Solutions

Ans 1: a

Sol: The word 'LEADING' has 7 different letters.
When the vowels EAI are always together, they can be supposed to form one letter.
Then, we have to arrange the letters LNDG (EAI).
Now, 5 (4 + 1) letters can be arranged in 5! = 120 ways.
The vowels (EAI) can be arranged among themselves in 3! = 6 ways.
Required number of ways = (120 x 6) = 720.

Ans 2: a

Sol: Time from 5 am. on a day to 10 pm. on 4th day = 89 hours.

Now 23 hrs 44 min. of this clock = 24 hours of correct clock.

356/15 hrs of this clock = 24 hours of correct clock

89 hrs of this clock = (24 x 31556 x 89) hrs of correct clock.

= 90 hrs of correct clock.

So, the correct time is 11 p.m.

Ans 3: c

Sol: let ABCD be the given parallelogram

Area of parallelogram ABCD = 2 x (area of triangle ABC) now a = 30m, b = 14m and c = 40m

s=1/2 x (30+14+40) = 42

Area of triangle ABC= $\sqrt{[s(s-a)(s-b)(s-c)]}$

= $\sqrt{[42(12)(28)(2)]}$

=168 sq m

=area of parallelogram ABCD = 2 x 168 = 336 sq m

Ans 4: b

Sol: 3.78 meters =378 cm = 2 × 3 × 3 × 3 × 7

5.25 meters=525 cm = 5 × 5 × 3 × 7

Hence common factors are 3 and 7

Hence LCM = 3 × 7 = 21

Hence largest size of square tiles that can be paved exactly with square tiles is 21 cm.

Ans 5: c

Sol: Total distance travelled in 12 hours =(35+37+39+.....upto 12 terms)

This is an A.P with first term, a=35, number of terms,

n= 12,d=2.

Required distance = 12/2[2 x 35+{12-1) x 2]

=6(70+22)

= 552 kms.

Ans 6: c

Sol: Let the cost price of 1 pen is Re 1

Cost of 8 pens = Rs 8

Selling price of 8 pens = 12

Gain = 12 - 8 = 4

Gain% = (gain / cost × 100)% = (4 / 8×100)% = 50%

Ans 7: a
Sol: P can complete the work in (12 x 8) hrs = 96 hrs
Q can complete the work in (8 x 10) hrs=80 hrs
Therefore, P's 1 hour work=1/96 and Q's 1 hour work= 1/80
(P+Q)'s 1 hour's work =(1/96) + (1/80) = 11/480. So both P and Q will finish the work in 480/11 hrs
Therefore, Number of days of 8 hours each = (480/11) x (1/8) = 60/11

Ans 8: b
Sol: Let there be x pupils in the class.
Total increase in marks = (x * 1/2) = x/2.
x/2 = (83 - 63) => x/2 = 20 => x = 40

Ans 9: a
Sol: At 3 O'clock, Minute hand is at 12 while the Hour hand is at 3. Again the minute hand has to sweep through (30 x 5) ie 150° for reaching the figure 5 to show 25 mins.
Simultaneously the Hour hand will also rotate for 25 mins. Thus starting from the mark, 3 the hour hand will cover an angle = (25 x 30) / 60 = 12.5°
Hence, Angle between Hour and the Minute hand = (60 - 12.5) = 47.5°

Ans 10: b
Sol: Let Rs. x be the fare of city B from city A and Rs. y be the fare of city C from city A.
Then, 2x + 3y = 77 ...(i) and
3x + 2y = 73 ...(ii)
Multiplying (i) by 3 and (ii) by 2 and subtracting, we get: 5y = 85 or y = 17.
Putting y = 17 in (i), we get: x = 13.