1. 12 members were present at a board meeting. Each member shake hands with all of the other members before and after the meeting .How many hand shakes were there?
a) 130
b)134
c)132
d)135
Answer: C
Explanation:
In order to have a hand shake there must be two members. Therefore to select 2 out of 12 we have 12C2.
This happens twice that is before and after the meeting
Answer = 12C2 ×2 = 132

2. An emergency vehicle travels 10 miles at a speed of 50 miles per hour. How fast must the vehicle travel on return trip if the round trip travel time is to be 20 minutes?
a) 75 mph
b) 70 mph
c) 65 mph
d) 80 mph
Answer: a
Explanation:
Going trip time = t =
d
s
 =
10
50
×
60
 = 12 minutes.
Given total time = 20 minutes
Return trip time = Total time – Going trip time = 20 – 12 = 8 minutes =
8
60
 hours.
As the distance is 10 miles during even return trip,
The return speed =
d
t
 =
10
8
60
 =
10
×
60
8
 = 75 mph

3. Mary and John can do a piece of work in 24 day; John and Vino in 30 days;Vino and Mary in 40 days. If Mary, John and Vino work together they will complete work in ?
a) 10 days
b) 20 days
c) 47 days
d) 45 days
Answer: b

Explanation:
Given that
Mary and John take 24 days; i.e., (Mary + John)'s 1 day's work =
$\frac{1}{24}$
John and Vino take 30 days; i.e., (John + Vino)'s 1 day's work =
$\frac{1}{30}$

Vino and Mary take 40 days; i.e., (Vino + Mary)'s 1 day's work =
$\frac{1}{40}$
Adding above 3 equations, we get,
[(Mary + John) + (John + Vino) + (John + Vino)]'s 1 day's work =
$\frac{1}{24}$
+
$\frac{1}{30}$
+
$\frac{1}{40}$
2((Mary + John + Vino)'s 1 days work =
$\frac{1}{24}$
+
$\frac{1}{30}$
+
$\frac{1}{40}$
2(Mary + John + Vino)'s 1 days work =
$\frac{5 + 4 + 3}{120}$
$= \frac{1}{10}$
Therefore, (Mary + John + Vino)'s 1 days work =
$\frac{1}{20}$
i.e., Mary, John and Vino together can complete the work in 20 days.

4. My friend collects antique stamps. she purchased two, but found that she needed
to raise money urgently. So she sold them for Rs. 800 each. On one she made 20% and
on the other she lost 20%. How much did she gain or lose in the entire transaction?
a) she lost Rs 500.67
b) she lost Rs 666.67
c) she gain Rs 666.67
d) she gain Rs 500.67
Answer: b
Explanation:
Selling prices were given. Assume that on the first stamp she made profit and on
the second stamp she made loss.
So cost prices of the both stamps =
800

120
%
+
800
80
%
 = 1666.66
So She incurred a loss of 66.66 rupees.

5. If the sum of n terms of two series in A.P. are in the ratio (5n + 4) : (9n + 6) then find the ratio of their 13th terms.
a.
129
231
b.
1
2
c.
23
15
d. None of the above
Answer: a
Explanation:
Formula for sum of n terms in AP =
S
n
 =
n
2
(2a + (n – 1)d]
5n + 4 ⇒ 5(n – 1) + 9 ⇒
[
2
(
9
2
)
+
(
n
–
1
)
5
]
Common difference (d) = 5, First term (a) =
9
2
Similarly
Second series given 9n + 6
⇒
 9(n – 1) + 15 ⇒
[
2
(
15
2

)
+
(
n
−
1
)
9
]

Common difference (d) = 9, First term (a) =
15
2
So
13th term for first series is = a + 12d =
129
2
13th terms for second series is = a + 12d =
231
2
Ratio =
129
231

6. A team P of 20 engineers can complete work or task in 32 days. Another team Q of
16 engineers can complete same task in 30 days.Then the ratio of working capacity
of 1 member of P to the 1 member of Q is
a. 3 : 2
b. 4 : 3
c. 2 : 5
d. 3 : 5
Answer: b
Explanation:
Let the capacity of an engineer in P = x units, and in Q = y units.
Working capacity of P = x × 32 × 20
Working capacity of Q = y × 16 × 30
As the total work is same, we equate the above equations.
⇒ x × 32 × 20 = y × 16 × 30
⇒
x
y
=
16
×
30
32
×
20
=
3
4

7. Ravi's salary was reduced by 25%. Percentage increase to be effected to bring
salary to original level =
a. 20%
b. 25%
c. 33 1/3 %
d. None of the above
Answer: b

Explanation:
Let the Salary be 100.
Salary was reduced by 25%. So present salary = 75.
Percentage has to be increased in order to get Original level = $\frac{25}{75} \times 100$ = 33.33 %

8. An ore contains 25% of an alloy that has 90% iron. Other than this, in remaining 75% of the ore ,there is no iron. How many kgs of the ore are needed to obtain 60 kg. of pure iron.?
a.250
b.275
c.300
d.166.66
Answer: d
Explanation:
Let us take 100x kgs of ore. Now it contains 25x kgs of alloy and it contains 90% (25x) kgs of iron.
90% (25x) = 60 kg ⇒ x = $60 \times \frac{100}{90} \times \frac{1}{25} = \frac{8}{3}$

So iron ore required = $100 \times \frac{8}{3}$ = 266.66

9. Find the day of the week on 16th july, 1776.
a. Sunday
b. Monday
c. Tuesday
d. Wednesday
Answer: c
Explanation:
Split the year 1775 + 16th july 1776
Till 1600 years no odd days.
1601 to 1700 = 5 odd days
1701 to 1775 = 75 + 18 = 93 = 2 odd days. (75 years has 93 odd days (
∵
 18 leap + 57 non leap years)
upto 15th july 1776 = 31 + 29 + 31 + 30 + 31 + 30 + 15 = 197 = 1 odd day.
Total odd days = 5 + 2 + 1 = 8 = 1 odd day.
So one day after Monday. That is Tuesday.

10. The radius of a sphere is increased by 50%. The increase in surface area of the sphere is :
a. 100%

b. 125%
c. 150%
d. 200%
Answer: b
Explanation:
Take radius 100. Then surface area is $4 \times \pi \times 100 \times 100$.
After increase radius by 50% the radius becomes 100 + 50% of 100 = 150
Then new surface area is $4 \times \pi \times 150 \times 150$
Then put the values into formula of percentage =

$$\frac{4\pi 150^2 - 4\pi 100^2}{4\pi 100^2} \times 100 = 125\%$$

11. On 8th Dec, 2007 Saturday falls. What day of the week was it on 8th Dec, 2006?
A.Sunday
B.Thursday
C.Tuesday
D. Friday
Answer: d
Explanation:
8th Dec 2007 – 8th Dec 2006 = 52 weeks 1 day. So Dec 8th 2006 is behind one day = Friday

12. Which one of the following option is the closest in the meaning to the word given below..
MITIGATE
a) Diminish
b) Divulge
c) Dedicate
d) Denote
Answer: a
Explanation:
Mitigate means to make something less severe. Divulge means reveal. Denote means indicate. Diminish means to make or to cause something to become less in size, importance etc.

13. On increasing the price of T.V. sets by 30%, their sale decreases by 20%. What is the effect on the revenue receipts of the shop ?
a. 4% increase
b. 4% decrease
c. 8% increase
d. 8% decrease

Answer: a
Explanation:
Let the price be = Rs.100, and number of units sold = 100
Then, sale value = Rs.(100 × 100) = Rs.10000
New sale value = Rs.(130 × 80) = Rs.10400
Increase% =
$$\frac{400}{10000} \times 100 = 4\%$$

14. In an examination, 35% of total students failed in Hindi, 45% failed in English and 20% in both. The percentage of these who passed in both the subjects is :
a. 10%
b. 20%
c. 30%
d. 40%
Answer: d
Explanation:
Formula n(a∪b) = n(a) + n(b) − n(a∩b)
Fail in Hindi or English = 35 + 45 − 20 = 60
Therefore students who passed = 100 − 60 = 40.

15. Find the angle between the minute hand and hour hand of a click when the time is 7.20?
Answer: 100 degrees
Explanation:
Use formula
$$\theta = \left| 30h - \frac{11}{2}m \right|$$

$$\theta = \left| 30 \times 7 - \frac{11}{2} \times 20 \right| =$$

100
0

16. How will you measure height of building when you are at the top of the building? And if you have stone with you.
Answer:
Explanation:
Throw stone from top and note the time,t.
Find height using formula
$s = u \times t + 0.5 \times g \times t2$
Where $u = 0$