Logical Problems

The word 'Logic' is derived from the Greek noun 'logos' meaning both 'thought' and 'the word expressing thought'.

LOGIC, is the 'science of thought as expressed in language'. This means that the questions on logic are to be solved as per the information given without any concern of the formal validity or truth of the statements 'i.e. conclusion should follow directly from the statements given.

Examples :

1. A software engineer has the capability of thinking 100 lines of code in five minutes and can type 100 lines of code in 10 minutes. He takes a break for five minutes after every ten minutes. How many lines of codes will he complete typing after an hour?
a)250

b)220

c)150

d)200

Ans: a

Explanation: First, 5 five minutes he thinks, next five minutess he write code then takes a break. So for the first 15 mins he writes 50 lines of code. Next 5 minutes he write, then 5 min. think & 5 minutes rest. Next 10 minutes write, then 5 minutes rest. Next 5 minutes think, 5 minutes write and 5 minutes he takes rest. 25 minutes he write. In 10 min he writes 100 lines. So in 25 min. 250 lines.

2. Nikhil gets Rs.250 from his parents every week for his expenses. He puts Rs.5 in his piggy bank on everyday except Sunday when he puts Rs.10 in the piggy bank. He eats subsidized lunch in the college canteen for Rs. 10 on all college days except Saturday when he treats himself to the special lunch for Rs.25. Bus fare to college is Rs.4 each way. He has got a holiday on Sunday. This week, Nikhil wants to buy a book which costs Rs.100. For this, he was walking to and from the college. He is left with Rs.3 after buying the book. Assuming no other expenses, how many times did Nikhil walk this week?

a)2

b)3

c)4

d)5
Ans:c

Explanation: 40 goes into the piggy bank leaving Rs.210 for expenses. Normal expense on lunch is Rs.75 and on bus Rs.48, leaving Rs.87. Nikhil is short of Rs.13 for the book. For this, if he saves bus fares, he must walk four times saving Rs.16, and then he is left with Rs.3 after buying the book. Hence option c.

3. Akshar, Brinda, Cathy and Dinesh are four friends who live in the same area and work for the children in a nearby slum. One of them cooks the childrens breakfast and each of the other three teach a different subject from mathematics, reading & writing and drawing. They study mechanical engineering, psychology, medicine and economics. Neither the economics nor the psychology student cooks breakfast. Brinda does not teach reading & writing. Dinesh is the medical student, and he does not cook breakfast. Cathy teaches drawing. Akshar studies mechanical engineering. Who teaches mathematics?

a) Akshar,

b) Brinda,

c) Cathy

d) Dinesh
Ans:b

Explanation: Since the economics, psychology and medicine students do not cook breakfast, the mechanical engineering student does, and that is Akshar. Cathy teaches drawing. Now, since Brinda does not teach reading and writing, she must be teaching Maths. So option b.

4.A monkey starts climbing up a tree 20ft. tall. Each hour, it hops 3ft. and slips back 2ft. How much time would it take the monkey to reach the top?

a) 21 hours

b) 12 hours

c) 18 hours

d) 15 hours
Ans:c

Explanation: Every hour, he gains 3 ft and loses 2 ft, for a total gain of 1 ft. So after the 17th hour, he's at 17 ft high. in the 18th hour, he climbs up 3 feet. Since 17 ft + 3 ft = 20 ft, he's at the top of the tree. So option c.

5. If a light flashes every 6 seconds, how many times will it flash in ¾ of an hour?

a) 450

b) 451

c) 350

d) 425
Ans:b

Explanation: There are 60 minutes in an hour. In ¾ of an hour there are (60 * ¾) minutes = 45 minutes. In ¾ of an hour there are (60 * 45) seconds = 2700 seconds. Light flashed for every 6 seconds. In 2700 seconds 2700/6 = 450 times. The count start after the first flash, the light will flashes 451 times in ¾ of an hour. So option b.

Directions (Q. 6- 10) : There are five friends Sachin, Kunal, Mohit, Anuj and Rohan. Sachin ia shorter than Kunal but taller than Rohan. Mohit is tallest. Anuj is a little shorter than Kunal and little taller than Sachin.

6.Who is the shortest?

a)Rohan

b)Sachin

c)Anuj

d)Kunal

Answer: a

Explanation:

Let us denote the five boys by the first letter of their names,namely S, K, M, A and R.

Then , R < S < K < M and S < A < K.

R < S < A < K < M

Rohan is shortest.

7. If they stand in the order of their heights, who will be in the middle?

a)Kunal

b)Rohan

c) Sachin

d)Anuj

Answer: d

Explanation:

R < S < A < K < M

Anuj is in the middle.

8. If they stand in the order of increasing heights, who will be the second?

a) Anuj

b) Sachin

c) Rohan

d)Kunal

Answer: b

Explanation:

R < S < A < K < M.

In the order of increasing heights i,e shortest to tallest, Sachin is second.

9. Who is the second tallest?

a) Sachin

b) Kunal

c) Anuj

d) Rohan

Answer: b

Explanation:

R < S < A < K < M

Kunal is second tallest.

10. Who is taller than Anuj but shorter than Mohit?

a) Kunal

b) Rohan

c) Sachin

d)Data Inadequate

Answer: a

Explanation:

R < S < A < K < M.

Kunal is taller than Anuj but shorter than Mohit.