

SAMPLE QUESTIONS

1. My last salary was 5% less than my current salary and my current salary is 25% more than my friend's salary. By what percentage is my last salary greater than my friend's salary?

- A 15.87 %
- B 18.75 %
- C 20 %
- D 21 %
- E 26.67 %

2. Jimmy runs a zoo which keeps zebras, tigers, hyenas and giraffes. He is allowed to keep a maximum of 50 animals. The number of hyenas he is allowed to keep must not exceed twice the number of zebras. The attendance at the zoo varies in direct proportion to the total number of animals kept and the maximum possible attendance at the zoo is 126.

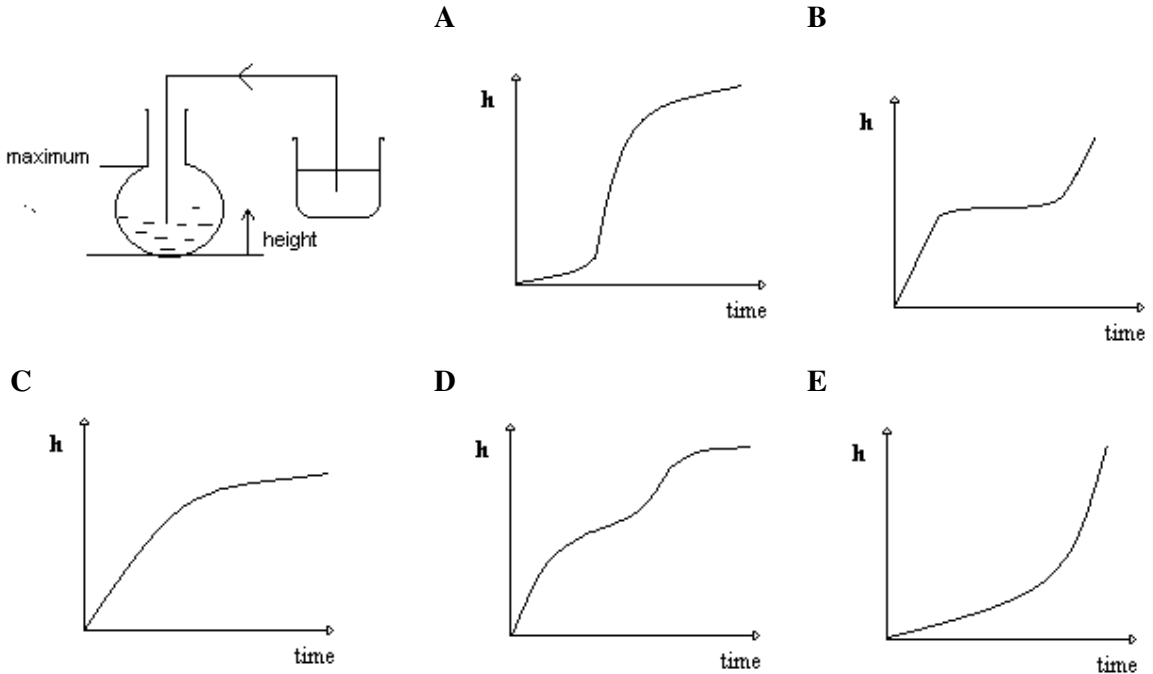
What is the number of tigers being kept today, if today he is keeping 4 giraffes and 10 hyenas and the attendance is 76?

- A 11
- B 12
- C 13
- D 14
- E 15

3. At Alabaster College meal tickets for whole-day feeding cost £4.50 each. Each student must purchase a book of 40 tickets. At Marble College students cook for themselves. For use of the kitchen equipment they must pay a fixed charge of £55 per term. Assuming that each term is 6 weeks long, what is the maximum amount, to the nearest 5 pence, that each student at Marble College should spend per day in order to be economically better off than students at Alabaster College? [Assume that the students at Alabaster College spend *this* same amount on the extra days not covered by dinner tickets].

- A £3.10
- B £3.15
- C £3.20
- D £3.05
- E £3.00

4. If I transfer liquid from a beaker into a flask at a constant rate as shown in the figure below, which of the graphs (A to E) shown below most closely depicts how the height, h , of the liquid in the flask varies with time?



5. If most members of group X also belong to group Y and only a few members of group S belong to group Y. Which of the following must be true?

1. Only a few members of group X belong to group S.
 2. Most members of group S do not belong to group X.
 3. Most members of group Y belong to group X.
- A 1 only
 B 2 only
 C 3 only
 D 1 and 2 only
 E none of the above.

6. In the population, people either possess gene X, or they do not. 95% of patients with disease A possess the X gene. 99% of people with the X gene do not have disease A. Of the population without the X gene, 99.75% do not have the disease. If in a sample group 10 people have disease A, what is the size of my sample group?

- A 4000
- B 1000
- C 1250
- D 1100
- E 1150

7. Billy has two labelled jars, exactly the same in every respect, each containing liquid of equal volume. Jar A contains water and Jar B contains milk. Billy takes a teaspoon of milk from Jar B and puts it into Jar A, mixing uniformly. One teaspoon of this new mixture is then put into Jar B. At the end of this process, which of the following is true?

1. The volume of milk in Jar A is greater than the volume of water in Jar B.
2. The volume of water in Jar B is greater than the volume of milk in Jar A.
3. The volume of water in Jar B is the same as the volume of milk in Jar A.
4. The volume of milk in Jar B is less than the volume of water in Jar B.
5. The volume of milk in Jar B is greater than the volume of water in Jar A.
6. The volume of milk in Jar B is the same as the volume of water in Jar A.

- A 1 and 3
- B 1 and 4
- C 2 and 5
- D 3 and 4
- E 3 and 6

8. If most serpentines are guanadines and most serpentines are mollians. Which of the following must be true?

1. Most mollians are serpentines.
2. Some guanadines are mollians.
3. Some serpentines are not mollians.

- A 1 only
- B 2 only
- C 3 only
- D 1 and 2 only
- E 2 and 3 only