The maximum mark in an examination is 100 and the minimum is 0. The average mark of seven students such that no two of them have scored the same marks is 88. If the median score is 92 and all the marks are integers, what is the maximum possible difference between the highest and the least mark obtained by these seven students?

1. 46 2. 54 3. 60 4. 99 5. 100

The average (arithmetic mean) of two numbers x and y is 15. If x, y, and z are non-negative integers such that

x < z < y, what is the minimum possible average of

x, y, and z?

1013  1023  15  11  **10**

If the average (arithmetic mean) of 5 positive integers is 11, what is the maximum possible difference between the largest and the smallest of these 5 numbers?

4 20 39 44 **50**



 The average weight of the women in a group is 60 kg and that of the men is 72 kg. If the average weight of the group is 68 kg, what is the ratio of women to men in the group?

If the median of -10, 29, 6, 11, 31 and x is 20. What is the least possible average of the 6 numbers?

11 1/6 **16** 16 1/6 16 2/3 16 1/3

When four is added to six times a number and the result squared, the result obtained is four times the square of the sum of the number and its next multiple. What is the number?

A sector of a circle of radius 5 cm is recast into a right circular cone of height 4 cm. What is the volume of the resulting cone?

A cylindrical vessel is filled with water up to some height. If a sphere of diameter 8 cm is dropped into the cylinder, the water level rises by half of the initial level. Instead, if a sphere of diameter 16 cm is dropped, the water level rises to a height h2. What percentage of this new height h2 is the initial level of water?

Chord AC at a distance of 7 cm from the center of a circle subtends an angle of 120 degrees at the center. What is the area of major segment?