

# Spicy Question #34



Students from Y7 to Y11 were all asked to pick a sport to play on their final day of school. The options for sport were Athletics, Basketball, Cricket, Swimming and Table Tennis.

Y9 students who picked Athletics : Y9 students who picked Cricket : Y9 students who picked Table Tennis = 13 : 12 : 11

Y7 students who picked Table Tennis : Y9 students who picked Table Tennis : Y11 students who picked Table Tennis = 20 : 11 : 6

The number of Y7 who picked Athletics as a percentage of Y10 students who picked Swimming is 88% 60% more Y9 students picked Cricket than Y11 students who picked Athletics.

The number of Y9 students who picked Swimming was five times as many as Y11 who picked Swimming. The mean number of students per year group who picked Athletics is 55.

The number of Y11 students who picked Cricket is a root of the equation  $x^2 - 1600 = 0$

The number of Y8 students who picked Cricket is equal to the largest prime number smaller than 50.

The total number of students from all year groups that chose Swimming is equal to  $6.6 \div 0.03$

The number of Y7 who chose Swimming is less than the number of Y8 who chose Swimming.

The total number of Y9 students is  $2 \times 11^2$

20% more Y9 students picked Cricket than Y7 students who picked Athletics.

Two fifths of the students who chose Table Tennis were in Y7.

The number of Y8 students who chose Table Tennis is the same as the number of Y10 students who chose Table Tennis.

There are 6 more Y8 students than there are Y9 students.

The number of Y8 students who chose Basketball is equal to  $p$ , where  $\tan(p^\circ) = 1$

40 Y7 students picked Athletics.

The number of Y10 students who chose Basketball is equal to the square of the number of Y9 students who chose Basketball.

The number of Y7 who chose Basketball is equal to  $(\sqrt{3})^{18} \div (\sqrt{27})^4$

The number of Y10 students who chose Cricket is equal to a quarter of the exterior angle of a regular decagon.

The number of Y7 who chose Swimming and the number of Y8 who chose Swimming are both square numbers.

The total number of Y11 students is 400% more than the number of Y11 students who picked Athletics.

The number of Y11 student who picked Basketball was three times as many as Y9 who picked Basketball.

The number of Y7 students who chose Cricket is equal to the area of a right angled isosceles triangle with a hypotenuse of  $12\sqrt{2}$

What percentage of the students in the school are Y10 who chose Athletics?

Give your answer to 3 significant figures.



**NO Calculator**

**SUBMISSION DEADLINE 12/2/23 - 7PM**

Video  
Solution



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