MATHEMATICS

YES OR NO

Answer each of the following questions with **Yes** or **No**

- 1. If two boys drink 2 glasses of milk in 2 minutes, is it true that four boys drink 4 glasses of milk in 4 seconds?
- 2. There are 12 people waiting for lifestyle counselling. Six out of them wear socks, 4 wear shoes. 3 have both socks and shoes. Are there 5 without shoes and socks, indeed?
- 3. In 2013 there were 4000 people cured with drug problems, 3 % of them were in prison. Is it right that there were 120 people cured with drug problem in jail?
- 4. According to the British Journal of Sport Medicine every hour you sit in front of the TV shortens your life with 22 minutes. Joe has been watching TV 3 hours a day since the age of 10. According to the article by the time he is 86 his life will be about 3.5 years shorter. Is this statement right?
- 5. Every 13th minute someone dies in the word due to smoking. Pete says that every day approximately 6646 people die because of smoking. Is he right?
- 6. 50,000 students were asked if they have ever kayaked. 22500 answered yes. Is it true if 45 % of the students have already tried this sport?
- 7. A boy decides that because of his diet his carbohydrate intake in the evening will not exceed 30 g. Can he drink 6.5 dl fruit juice with carbohydrate content of 4.6 g/100 ml?



- 8. Among Hungarian adults 61.8 % of are overweight, 49,7 % never take intensive exercise. Can we find out from the information above what percentage of overweight adults do not take intensive exercise?
- 9. Researchers at Cambridge University found that every year approximately 676 thousand people die due to the lack of exercise in Europe. Besides this, obesity causes the early death of 337 thousand people in Europe. Is it true, that the number of deaths due to the lack of exercise is more than twice as many as the number of deaths caused by obesity?
- 10. The road to Írottkő Peak near Kőszeg is 9 km long. A walker has to return by 5 PM in winter before dark from the 18 km walk. Peter estimates that he can walk with an average speed of 3 km/h uphill and 1.5 times faster downhill. These also include the short breaks, too. If he leaves at 12:20, and keeps pace with his plan, can he return before it gets dark?
- 11. Nurses have to calculate the IV rate C (the drops per minute in case of infusion), in drop/minute. They use the following formula:



 $C = \frac{cV}{60t}$

where c is the drop factor: drops/ml, V is the volume of the infusion in ml, t is number of hours while the infusion should be given. The nurse would like to double the time of the infusion (t) so that c and V won't change meanwhile. So she decides multiply the IV rate by four. Is she right?

- 12. Louis is a heavy smoker, he smokes a box of cigarettes (19) a day. A box of cigarettes costs 930 Ft. He was told if he quits smoking for 6 months, he can buy his heart desire: a bicycle, which costs 171 000 Ft. Is this possible?
- 13. According to a survey, in which an equal number of 16-year-old boys and girls were asked, 18.9 % of the girls and 20.9 % of the boys have already used prohibited substances. Is it true that exactly 20 % of the youngsters have used prohibited substances?
- 14. Nearly 27 thousand people die of lung cancer every year, and 90 % of them are heavy smokers. Kate declares that more than 24 thousand heavy smokers die of lung cancer every year. Is she right?
- 15. There was a survey in 2011 with 2000 youngsters. 19.9 % of them have already tried out a drug. We know that half of them have used the drug only once. Is it true that 129 have used the drug only once?

Answers:

#	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
Y/N	Ν	Y	Y	Y	Ν	Y	Y	Ν	Y	Ν	Ν	Ν	Ν	Y	Ν