

Winning the Lotto

Each week in Ireland we have the Lotto that takes place twice weekly. It costs €3 for 2 attempts. Seven balls are randomly drawn from 45, six main balls, then a bonus ball. If you match all six main balls you win the jackpot. Various prizes are won for different combinations of the balls, for example, match any three balls out of the main six, and you will win five euro.



Think about the chances of the following:

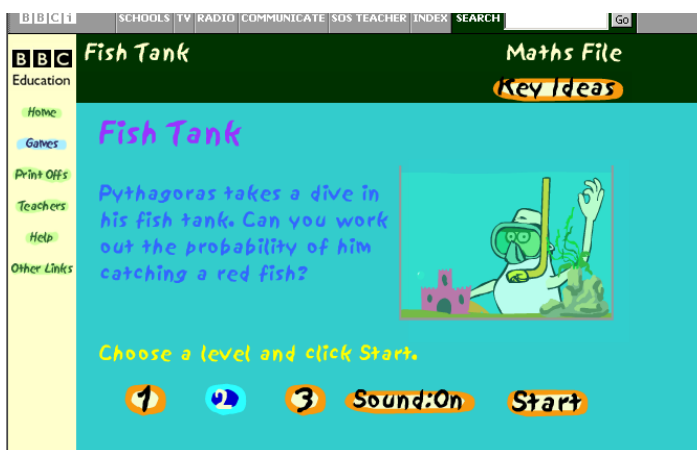
What is the probability of drawing ball number 5?

What is the probability of drawing an even numbered ball? Do you have the same chance of drawing an odd numbered ball?

What chance do you have of drawing a ball containing a digit of 1? Are you more likely to draw a ball which is a square number or one which is prime?

Thirteen is often classed as an unlucky number. Do you think this is true? Look at the table below. It shows the frequency of the number of times the balls have appeared to date. Which 5 numbers have appeared the most times? Which have appeared the least? Based on the figures in the table would you say that thirteen is unlucky? If you could play the lottery which six numbers would you pick and why?

1=52	2=59	3=67	4=55	5=53	6=49	7=52	8=50	9=57
10=53	11=50	12=52	13=69	14=40	15=61	16=43	17=55	18=53
19=50	20=53	21=57	22=51	23=56	24=52	25=33	26=53	27=61
28=54	29=52	30=48	31=51	32=64	33=44	34=49	35=52	36=62
37=55	38=60	39=68	40=54	41=48	42=48	43=37	44=62	45=50



The game opposite can be played interactively at www.bbc.co.uk/education/mathsfile/shockwave/games/fish.html

It tests your knowledge of probability and the effective use of equivalent fractions.

See if you can complete all 3 levels without any mistakes. You might win a prize.