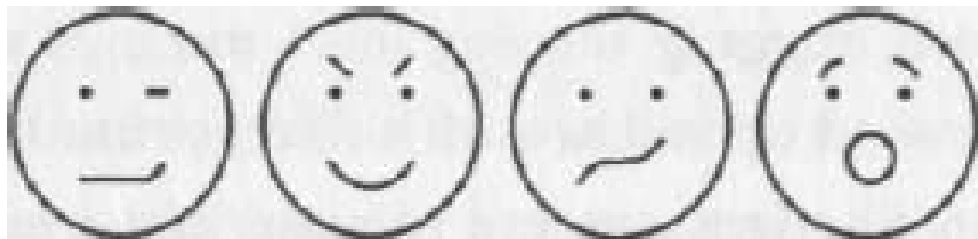
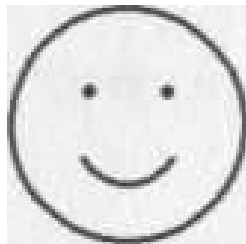


The Curious Game of the Book in the Class-Time



-
- You're going to see some pictures.
 - Write about their importance in the book (what the writer says about them, why/when do they appear, their meaning...).
 - Explain it in 4-5 lines. Remember, try to make references to the story and give details if possible!!

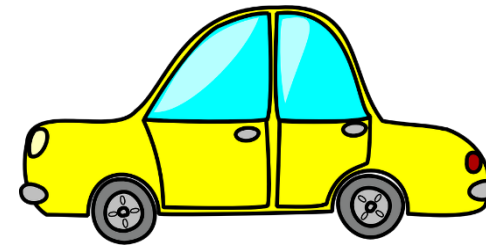
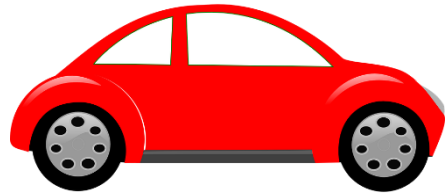
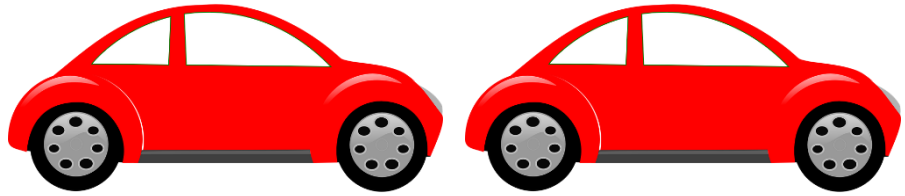
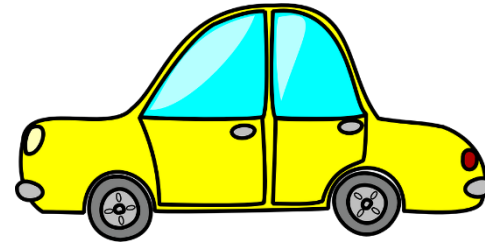
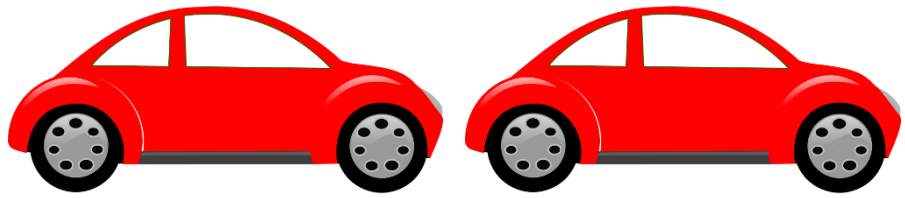


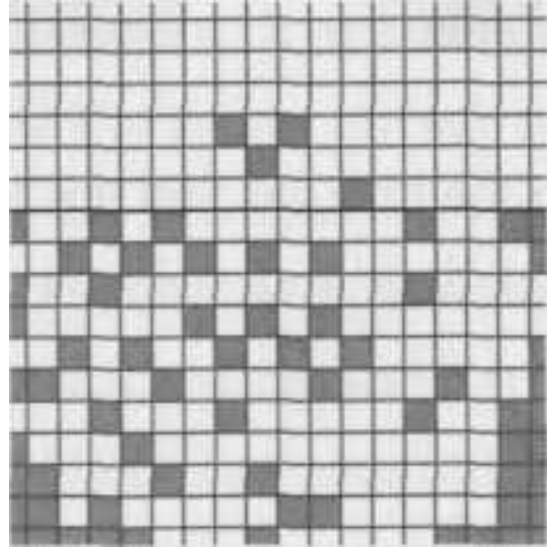
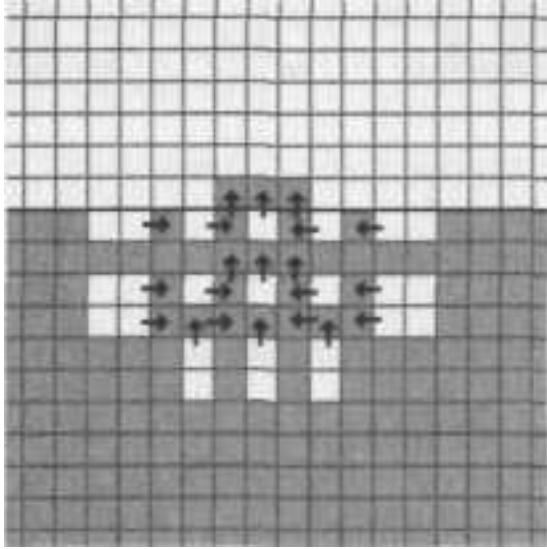
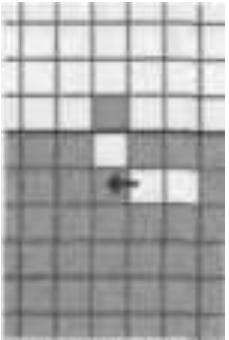
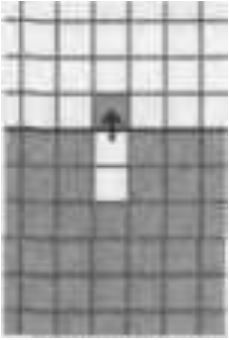
Hint: Prime numbers

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	etc.

	2	3		5		7			
11		13				17		19	
		23						29	
31						37			
41		43				47			etc.







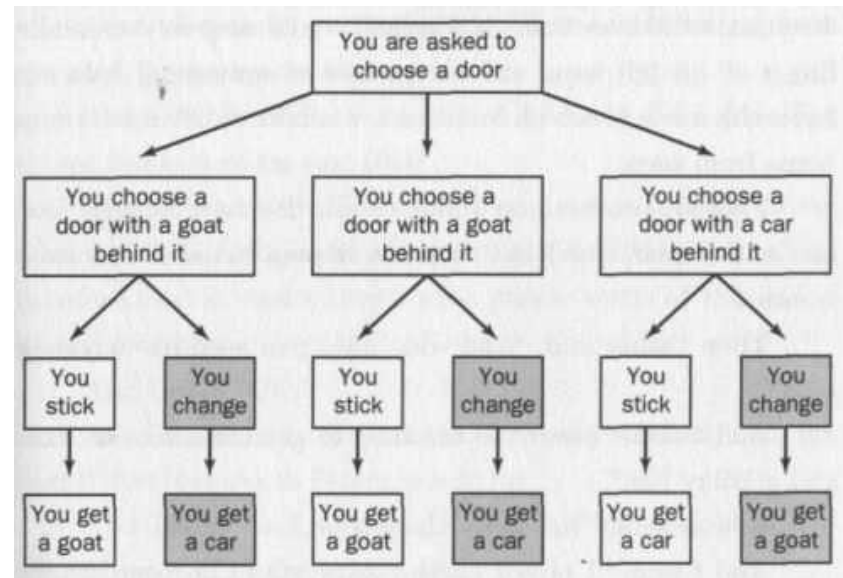
Let the doors be called X, Y and Z.

Let C_x be the event that the car is behind door X and so on.

Let H_x be the event that the host opens door X and so on.

Supposing that you choose door X, the possibility that you win a car if you then switch your choice is given by the following formula

$$\begin{aligned} & P(H_z \wedge C_y) + P(H_y \wedge C_z) \\ &= P(C_y) \cdot P(H_z : C_y) + P(C_z) \cdot P(H_y : C_z) \\ &= (1/3 \cdot 1) + (1/3 \cdot 1) = 2/3 \end{aligned}$$



Christopher

Swindon

Appendix

Question

Prove the following result:

A triangle with sides that can be written in the form $n^2 + 1$, $n^2 - 1$ and $2n$ (where $n > 1$) is right-angled.

Show, by means of a counterexample, that the converse is false.

Answer

First we must determine which is the longest side of a triangle with sides that can be written in the form $n^2 + 1$, $n^2 - 1$ and $2n$ (where $n > 1$)

$$n^2 + 1 - 2n = (n - 1)^2$$

and if $n > 1$ then $(n - 1)^2 > 0$

therefore $n^2 + 1 - 2n > 0$

therefore $n^2 + 1 > 2n$

Similarly $(n^2 + 1) - (n^2 - 1) = 2$

therefore $n^2 + 1 > n^2 - 1$

This means that $n^2 + 1$ is the longest side of a triangle with sides that can be written in the form $n^2 + 1$, $n^2 - 1$ and $2n$ (where $n > 1$).

Think about it...

What is life like
for people like Christopher?

REFERENCES

Images extracted from the book “The Curious Incident of the Dog in the Night-Time”, by Mark Haddon

Images from slides 5 and 6 extracted from:

www.pixabay.com

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