

THE PENCIL CASE PROBLEM 1

This problem arose because my wife and I chose to call our second son Leighland. Like all teachers, I had trouble coming up with a name that didn't send shivers down my spine every time it was spoken. When Leighland started Year 1, we bought him a pencil case with letter slots for his name. Unfortunately, his name was made up of nine letters and there were only eight slots on the pencil case. This was never a problem for our eldest son Jeremy (so named because of the long vowel sound at the end of his name—handy for yelling over long distances!). It is a fairly simple exercise to collect length of name data in order to check whether eight slots are enough.

Further Investigations

Use the Internet to contact a class from another country and compare the length of names.

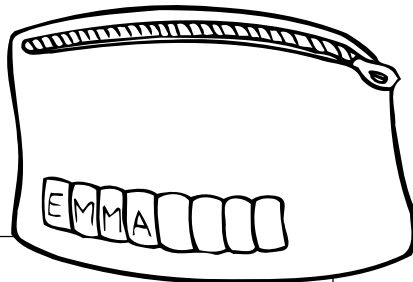
THE PENCIL CASE PROBLEM 1



? A pencil case which allows you to place the letters of your name into the slots on the front may be bought from most stationery shops. These pencil cases all come with eight slots into which letters may be placed.

Collect some data to determine whether eight slots are enough for most students to slot in the:

- letters of their first name;
- letters of their surname and first initial;
- letters of their first name and the initial of their surname;
- letters of their nickname.



Hints and Ideas



I could collect data from another class to check my findings.

My name is Alexander. It won't fit. I guess I could use Alex.



I'm going to list all the names of nine letters or more that I can think of.

Notes and Calculations



You may wish to collect some data via the Internet to determine how students from other countries would manage.

Questions

Where will you find the information?

What did you find out?

How will you present your findings?

Findings

THE PENCIL CASE PROBLEM 2

The problem was tried with a class, which contained quite an ethnic mix, and hence the second pencil case problem arose. The pencil cases come with a set of letters but when the letters are examined more closely, the unusual mix of letters becomes more apparent. For example there are only two As, Is and Os and only one U. Vowels are used in most English words but perhaps the frequency differs in names. A class list provides an excellent opportunity for collecting data as does a Baby Name book.

Further Investigations

The distribution of letters in English may be compared with the distribution in common names. A look at the game of Scrabble also stimulates a great deal of discussion.

THE PENCIL CASE PROBLEM 2



? The same pencil case comes with a set of letters, shown below, which may be cut to fit into the slots.

A	A	B	B	B	C	C	D	D	E	E	E	F	F
G	G	H	H	I	I	J	K	K	L	L	L	M	M
N	N	N	O	O	P	P	Q	R	R	R	S	S	S
T	T	U	V	V	W	X	Y	Z	"	"	!	*	?

Some letters such as E, L, N, R and S feature more often than others.

Collect some data to determine whether the mix of letters is appropriate for most students.

Hints and Ideas



My name is Alana and there aren't enough letter 'A's for me to finish my name.

I wonder why there are only two A's, 1's, O's and only one U when there are three B's, L's, R's and S's.

The most commonly used letter of the alphabet is 'e' in the English language, but is this true for names?

Yes No



How are the letters distributed in a game of Scrabble?

Notes and Calculations

Questions

Where will you find the information?

What did you find out?

How will you present your findings?

Findings