



# Is your foot one foot long?



How long is a foot? Discuss

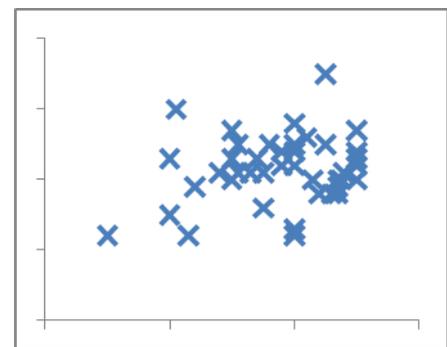
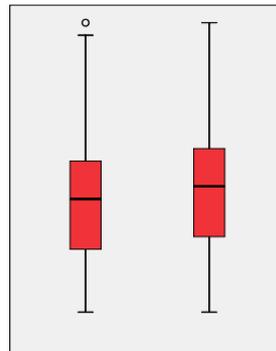
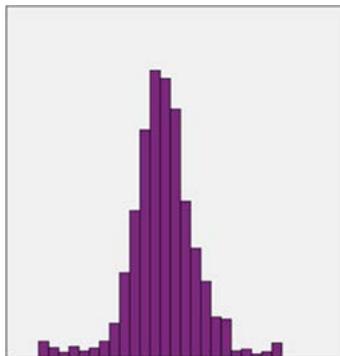
Compare a standard 12 inch foot with your foot.

Do you think anyone's foot is really one foot long? Whose might be?

The world's tallest woman, Zeng Jinlian had feet that were one foot two inches long. Robert Wadlow, the world's tallest man was eight feet eleven inches tall and had feet which were just over one and a half feet long.

Using the data in UKfootlengthheightage.xls, or by collecting your own data, carry out the following investigations.

1. Do taller people have bigger feet?
2. Do older people have bigger feet?
3. Do boys have bigger feet than girls?



Remember to plot the appropriate graphs and to calculate the appropriate statistics when doing the investigations.

## Extension

Investigate other old units such as hands, chains, pennyweights and rods.



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## Notes for Teachers

Some good activities to go with this task revolve around having some "footsticks" (sticks exactly 12 inches long) for pupils to use. Typical school rulers can be visually confusing to many pupils and inevitably will have centimetres on one or both sides these days although most pupils will have heard of feet and inches, indeed many of those I've encountered will automatically give their height in this way even if they have no idea of the size of the units involved ! A possible introduction for this activity might be to read and discuss these extracts from "Alice in Wonderland":

*... 'Curiouser and curiouser!' cried Alice (she was so much surprised, that for the moment she quite forgot how to speak good English); 'now I'm opening out like the largest telescope that ever was! Good-bye, feet!' (for when she looked down at her feet, they seemed to be almost out of sight, they were getting so far off). 'Oh, my poor little feet, I wonder who will put on your shoes and stockings for you now, dears? I'm sure I shan't be able! I shall be a great deal too far off to trouble myself about you: you must manage the best way you can...*

*... Just then her head struck against the roof of the hall: in fact she was now more than nine feet high, and she at once took up the little golden key and hurried off to the garden door.*

*Poor Alice! It was as much as she could do, lying down on one side, to look through into the garden with one eye; but to get through was more hopeless than ever: she sat down and began to cry again.*

*'You ought to be ashamed of yourself,' said Alice, 'a great girl like you,' (she might well say this), 'to go on crying in this way! Stop this moment, I tell you!' But she went on all the same, shedding gallons of tears, until there was a large pool all round her, about four inches deep and reaching half down the hall...*

*... 'Well, I should like to be a LITTLE larger, sir, if you wouldn't mind,' said Alice: 'three inches is such a wretched height to be.'*

*'It is a very good height indeed!' said the Caterpillar angrily, rearing itself upright as it spoke (it was exactly three inches high).*

*'But I'm not used to it!' pleaded poor Alice in a piteous tone. And she thought of herself, 'I wish the creatures wouldn't be so easily offended!'*

*'You'll get used to it in time,' said the Caterpillar; and it put the hookah into its mouth and began smoking again...*

*... After a while she remembered that she still held the pieces of mushroom in her hands, and she set to work very carefully, nibbling first at one and then at the other, and growing sometimes taller and sometimes shorter, until she had succeeded in bringing herself down to her usual height.*



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*It was so long since she had been anything near the right size, that it felt quite strange at first; but she got used to it in a few minutes, and began talking to herself, as usual. `Come, there's half my plan done now! How puzzling all these changes are! I'm never sure what I'm going to be, from one minute to another! However, I've got back to my right size: the next thing is, to get into that beautiful garden--how IS that to be done, I wonder?' As she said this, she came suddenly upon an open place, with a little house in it about four feet high. `Whoever lives there,' thought Alice, `it'll never do to come upon them THIS size: why, I should frighten them out of their wits!' So she began nibbling at the righthand bit again, and did not venture to go near the house till she had brought herself down to nine inches high...*

Unmarked foot – long measures or footsticks are ideal to get pupils to compare both their own feet and others to one foot. A possible homework task might be to allow pupils to take a footstick home and use it to fill in a chart like this with names:

Shorter than one foot	Equal to one foot	Longer than one foot
Me (9)	James (13)	Uncle Peter (43)
	Mum (35)	

An extension may be to ask them to include the foot length and age of the person.