# Big Strides!

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| Click or tap here to enter text. |

**Student Name:**

## Data Analysis

Research has shown that a person’s height is directly related to the length of their step (this is called their stride). They have calculated that your stride length (cm) is approximately 43% of your total height (cm).

1. **To calculate your stride length, use a ruler to measure your height (cm) and follow the formula below:**

### $$Stride length (cm)=Height (cm)×0.43$$

### $Stride length \left(cm\right)=$Click or tap here to enter text.$ ×0.43$

### $Stride length \left(cm\right)= $Click or tap here to enter text.$ $

### If every step you took equaled your calculated stride length then approximately how far would you travel if you took 75 steps?

### $$Total distance (cm)=Stride length (cm)×75$$

### $Total distance (cm)=$Click or tap here to enter text.$ ×75$

### $Total distance (cm)=$Click or tap here to enter text.$ $

1. **A better unit of measurement for this distance is metres (m) and kilometres (km). Convert your total distance (cm) to both metres (m) and kilometres (km) below.**

### $$Total distance \left(m\right)=Total distance \left(cm\right)÷100$$

### $Total distance \left(m\right)= $$Click or tap here to enter text.$$ ÷100$

### $Total distance \left(m\right)=$Click or tap here to enter text.

### $$Total distance \left(km\right)=Total distance \left(m\right)÷100$$

### $Total distance \left(km\right)=$$Click or tap here to enter text.$$ ÷100$

$ Total distance \left(km\right)=$$Click or tap here to enter text.$

1. **Do you believe centimetres, meters or kilometres is the best unit to display distance travelled when taking 75 steps? Why?**

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| Click or tap here to enter text. |

**Further Analysis**

According to the census data, the average height of a Grade 5/6 student is 147.6cm. The AFL has calculated that the average height of a male player is 185cm.

### Calculate the stride length (cm) of an average Grade 5/6 student?

### $$Stride length (cm)=Height (cm)×0.43$$

### $Stride length \left(cm\right)=$Click or tap here to enter text.$ ×0.43$

### $Stride length \left(cm\right)= $Click or tap here to enter text.$ $

### Calculate the stride length (cm) of an average AFL player?

### $$Stride length (cm)=Height (cm)×0.43$$

### $Stride length \left(cm\right)=$Click or tap here to enter text.$ ×0.43$

### $Stride length \left(cm\right)= $Click or tap here to enter text.$ $

1. **Create a column graph comparing the stride length (cm) of an average Grade 5/6 student, average AFL player and yourself.** *Once you have finished take a photo or screen show of your graph and insert in the box below.*

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**Extension**

**How many steps would it take the average Grade 5/6 student to cover 14.5km? This is the average distance Patrick Dangerfield covers in an AFL match.**