

Correlating Femur Length and Height



Miss School, Miss Out!

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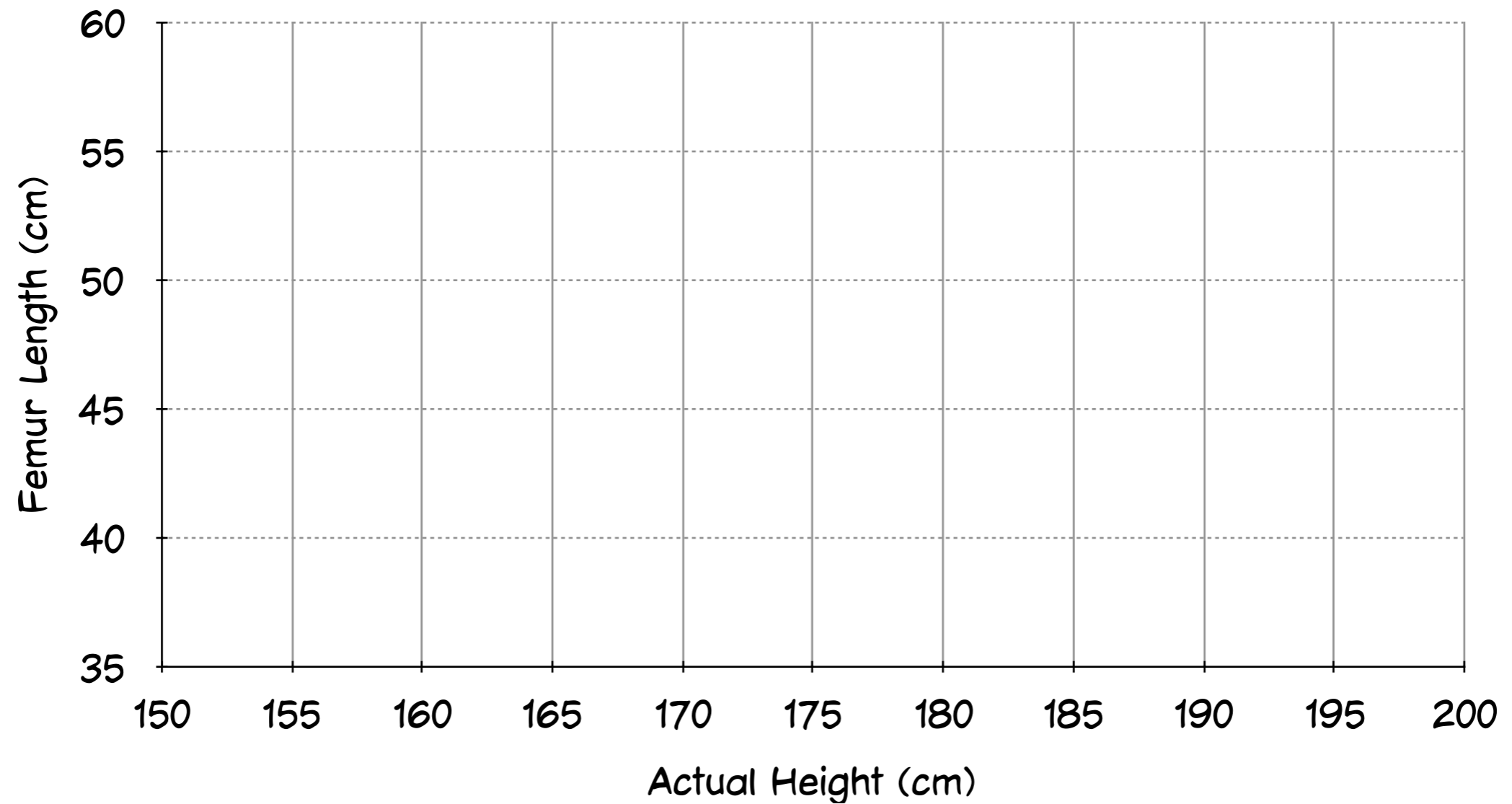
- **Question:** Are femur length and height correlated?
- **Hypothesis:**
- **Procedure:** measure the length of your femur from the greater trochanter to the lateral epicondyle in cm; measure height in cm; graph the data
- **Observations/Data:** data table
- **Analysis:** Graph: femur length (Y axis) and height (X axis)
- **Conclusion:** accept/reject hypothesis using DATA

Individual	Actual Height (cm)	Femur Length (cm)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		

Individual	Actual Height (cm)	Femur Length (cm)
1	166.4	43.3
2	170.2	46.3
3	175.3	47
4	195.6	49
5	182.9	45.5
6	162.6	45.5
7	168	41.5
8	150.5	40.5
9	154.4	43
10	156.2	45.5
11	164	45
12	160	42
13	164	46
14	190.5	52
15	162.6	44
16	162.6	39
17	190.5	46
18	163.2	39

R = ?

Femur Length vs. Actual Height



Height Estimation Using the Femur	
Male	$(2.32 \times \text{length of the femur in cm}) + 65.53$
Female	$(2.47 \times \text{length of the femur in cm}) + 54.10$

$$\left(\left| \text{Actual} - \text{Estimated} \right| \right) / \text{Actual} \times 100$$

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