What’s Your Horsepower?

Purpose: To determine our power requirement for climbing a staircase – both by walking and running.

Data: Number of stairs:\_\_\_\_\_\_\_

Height of each step:\_\_\_\_\_\_\_\_

Height of stairs:\_\_\_\_\_\_\_\_

Force of Gravity or Weight :\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Slow Trial | Time | Distance | Work | Power | HP |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Fast Trial | Time | Distance | Work | Power | HP |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

Work = F x d Power = Work/time Horsepower = Power/750

Conclusion: Please write a short paragraph on what you found. Include the difference between work and power. Is your horsepower more or less when you go up the stairs fast or slow? Does it take more work to go up a ladder 10 meters, or up a ramp 10 meters high? Why?

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