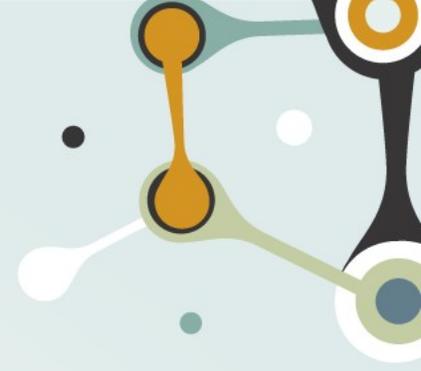




Opposition: Tall towers

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Problem 6: Tall Towers

A tower is built by stacking **rectangular bricks** on top of each other. Some people argue that the **maximum height** of the tower is limited by the **human skill** to place the bricks gently; others may say that the limiting factor is **non-perfect shape of the bricks**. Perform experiments to outline the **factors that limit the maximum height** of such a tower.

Theory



1. Mentioned how human factor takes the tower down
2. Shown the real life limit



1. Insufficient theoretical explanation to why the tower falls (centre of mass of bricks)
2. The bricks having 1nm difference doesn't make a difference
3. Said a machine would build it taller but no real life evidence to support that claim
4. Environmental factors mentioned but not explained

Experiment



1. Used the same type of bricks in one try
2. Accounted the imperfect shape of the bricks



1. Didn't present quantitative results for measurements
2. Did not isolate human factor from imperfection factors (e.g. using leveled bricks to test only the human factor)
3. Did not level the place where the stacking was done
4. Insufficient justification for the significance of the human factor
5. Used only one type of blocks in the presentation
6. Used only one method for stacking the bricks

Questions:

1. When does the tower fall?
2. Is there a theoretical maximum height?
3. How many stacking methods did you test?
4. How did you limit the error produced from the shape of the bricks?
5. Is the angle of the table important?
6. How did you eliminate the human factor?
7. How was the surface on which the tower was stacked leveled?
8. Does age affect the maximum height of the tower?

Thank
you!

