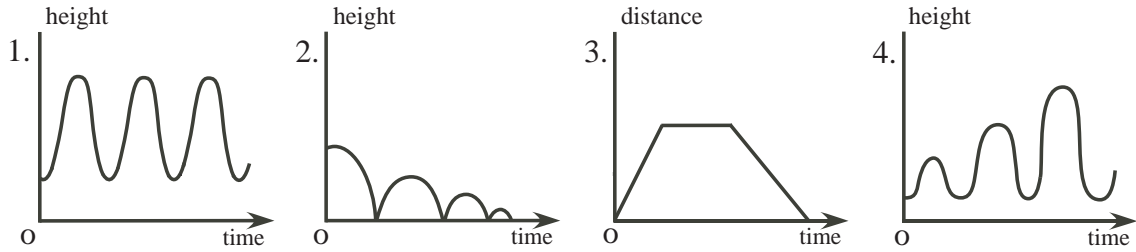


**Problem**

Match each graph to the most suitable story. Indicate what the height or distance is in each case.



- a) Sarah runs eagerly to visit a friend, stays for an hour, then walks slowly home.
- b) Tasha's Grandma has been pushing her on a swing for a while.
- c) Wei Li pumps herself up on a swing.
- d) A flat stone bounces across the surface of a pond.

## Hints

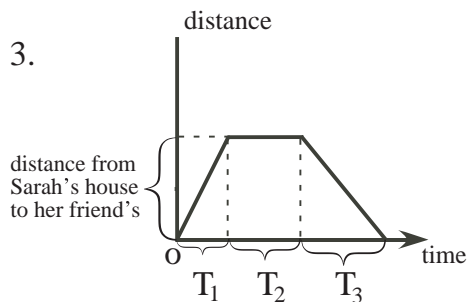
**Hint 1** - Which story involves distance travelled?

**Hint 2** - As she pumps the swing, which graph could depict Wei Li going higher and higher?

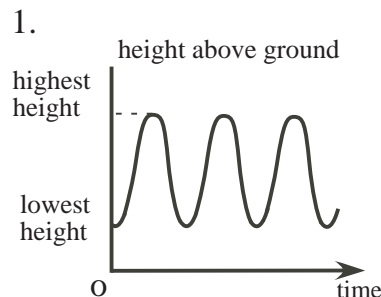
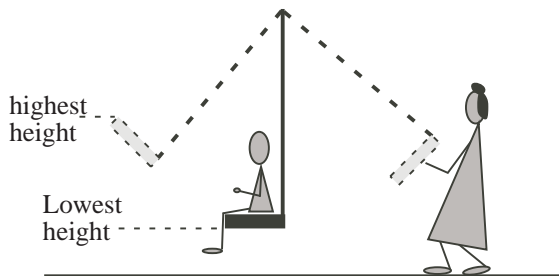
**Solution**

a) Since the only graph for which distance stays the same for a time is graph 3, this seems a logical choice.

Note that the time  $T_1$  is less than the  $T_3$ , since Sarah *runs* to her friend's house, but walks slowly home.  $T_2$  is the time she spends at her friend's.

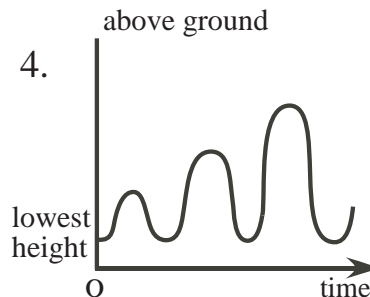


b) As Tasha's Grandma pushes her, the swing moves from lowest to highest height from the ground.



Note: Sometimes a child being pushed on a swing hollers "Higher! Higher!" with each push. Thus graph 4 could also be a valid answer for b).

c) Since Wei Li is pumping herself up on the swing, her height above the ground increases with each cycle of the swing, as depicted in graph 4.



d) As the stone skips across the surface of the pond, it bounces less high with each skip, so its height above the surface is depicted by graph 2.

