

# POOL PARTY!!



Math 306  
Competency 1  
“Solves a Situational Problem”

Name: \_\_\_\_\_

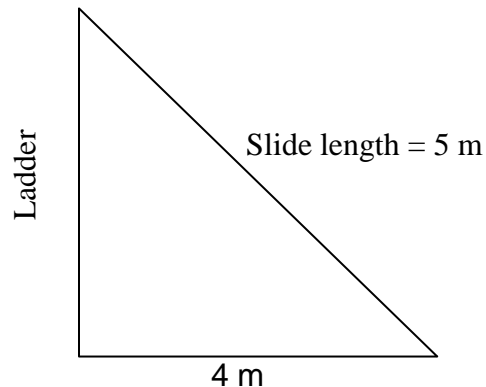
Date: \_\_\_\_\_

Group: 306- \_\_\_\_\_

Kelley recently won a National Math Competition in which she won a large cash prize. She's always wanted an in-ground pool to host pool parties for all of her celebrity friends. She has hired you as a landscape architect to help her design the pool and fit it into her budget.

Here is the layout that Kelley wants for her backyard:

- The pool is a rectangle.
- The length measures 8 times more than the width.
- She estimates the perimeter to be more than 54 m but less than 90 m.
- Kelley needs to install a fence around the pool and the cost is \$50 per meter.
- The fence will be 5 m away from the edges of the pool.
- She needs to put a cover on the pool which costs \$40 / m<sup>2</sup>.
- The kamikaze slide that Kelley's friend donated is represented below:



- The rungs on the ladder are 50 cm apart.
- The first rung is 50 cm from the ground, and the last rung is 50 cm from the top of the slide.
- She wants to cover the rungs with grip tape to prevent slipping.
- The cost of covering one rung is \$10.75.

**GIVE KELLEY THE MAXIMUM AND MINIMUM COST FOR THE JOB.**

**SHOW YOUR WORK!**

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<b>CHECKLIST</b>	
Did you show all your work?	
Did you take into account all the constraints?	
Is your work neat and organized?	
Do you have a range for your final answer?	

**The minimum and maximum costs of the job are:**

**from \$ \_\_\_\_\_ to \$ \_\_\_\_\_**