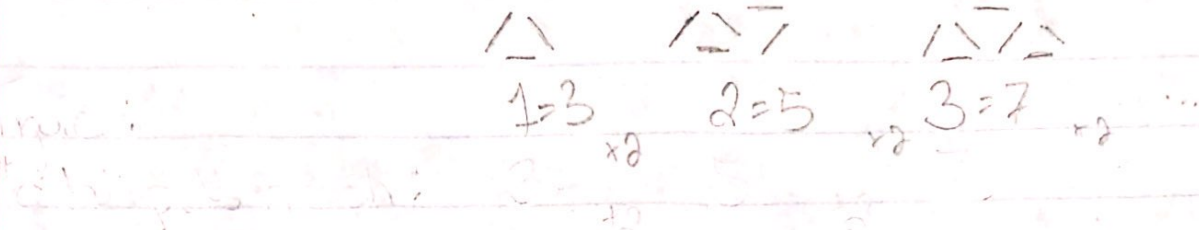


# Solutions to Problem Solving #1

## A Problem Solving Activity #1:



$$3 + 5 + 7 + \dots + 65 + 67 + 69$$

$$72 + 72 + 72 + \dots + 72 = 1224$$

## B Problem Solving Activity #1

Figure	1	2	3	...
# of toothpicks in figure	3	5	7	...

Seem to add 2 toothpicks when moving from one figure to next.  
Recall, we want

$$\begin{aligned} & \# \text{ of toothpicks in all figures up to last one w/ } 69 \text{ toothpicks} \\ &= \# \text{ in figure 1} + \# \text{ in figure 2} + \# \text{ in figure 3} + \dots + 69 \\ &= 3 + 5 + 7 + \dots + 67 + 69 \end{aligned}$$

We could add these up directly or

$$\begin{aligned} &= (3+69) + (5+67) + \dots \\ &= 72 + 72 + \dots + 72 = 1224 \end{aligned}$$

17 of these

69 toothpicks will be used in the 34<sup>th</sup> figure