

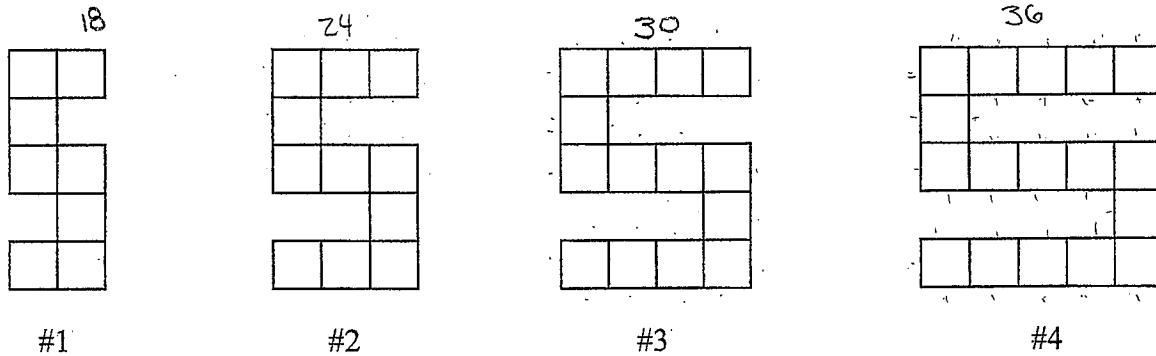
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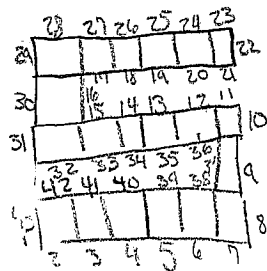
The Queen's Croquet-Ground #2

Utah's Largest Math Event (qualifier)

The shapes below show how the croquet-ground grows every time the Queen changes her mind. Now she wants the soldiers to build a new fence around each croquet-ground.



1. Use a pattern from the shapes above to determine the perimeter of the 5th shape in the sequence. Show or explain how you arrived at your answer. I know that she's adding 3 □'s each time (drew it) then counted all the sides that were showing & got my perimeter! I also noticed each one was adding 6 each time!



Perimeter = 42

2. Write a formula that you could use to find the perimeter of any shape n .

Explain how you found your formula. $6n + 12 = y$ I noticed that all ^{of} the perimeters were multiples of 6. $6 \times 1 = 6$, not 18. $6 \times 2 = 12$, not 24. $6 \times 3 = 18$, not 30. $6 \times 4 = 24$, not 36, & $6 \times 5 = 30$, not 42. They were all 12 away! I tried it & it worked!