PERIMETER

Use the following rectangle to answer the following:
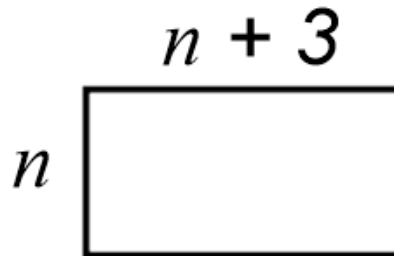
1. Write an algebraic expression that gives the perimeter for any value of n.

2. Find the perimeter if $n = 4$.

3. Complete the table below.

n	1	2	3	4	5
perimeter					

4. If n is an integer is it possible for the perimeter to be 32. Explain why or why not.

5. Find the area of the rectangle if the perimeter is 66 inches. Justify your solution.

PERIMETER Rubric

Description	Points	Total Points
1. Student gives correct answer such as: $4n + 6$ or $n + n + 3 + n + n + 3$	1	1
2. Student gives correct answer of 22 units	1	1
3. Student gives correct answers. <table><tr><td>*n*</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>perimeter</td><td>10</td><td>14</td><td>18</td><td>22</td><td>26</td></tr></table> Partial Credit (one error)	2 (1)	2
4. Student gives correct answer: No Student gives correct explanation such as: $32 - 10 = 22$ which does not divide by 4 evenly OR $n = 6$ has perimeter of 30 units and $n = 7$ has perimeter of 34 units	1 1	2
5. Student gives correct answer: $Area = 270\ in^2$ Student is able to find $n = 15$ because $4(15) + 6 = 66$ Student finds the correct dimensions of the rectangle: 18 15	1 1 1	3
TOTAL POINTS (possible points = 9 points)		