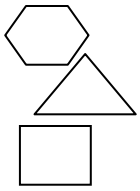
Pattern Blocks: Polygon Trains **Name**_____



You are the designer of a unique train ride attraction using polygon shaped cars. Each exposed side of a polygon will need to have a window for a passenger. Complete a table. Beside each table, write an algebraic expression for finding the number of windows if *X* represents the number of cars. Then find the number of windows if there are 20 cars, 50 cars, 100 cars.

1) This train will have triangular cars

Cars in the train (X)	Total windows
1	3
2	4
3	5
4	
x	

2) This train will have square cars

Cars in the train (X)	Total windows
1	4
2	6
3	
4	
x	

3) This train will have trapezoidal cars

Cars in the train (X)	Total windows

4) This train will have rhombus cars

Cars in the train (X)	Total windows

5) This train will have hexagonal cars

Cars in the train (X)	Total windows

6) This train will have octagonal cars

Cars in the train (X)	Total windows