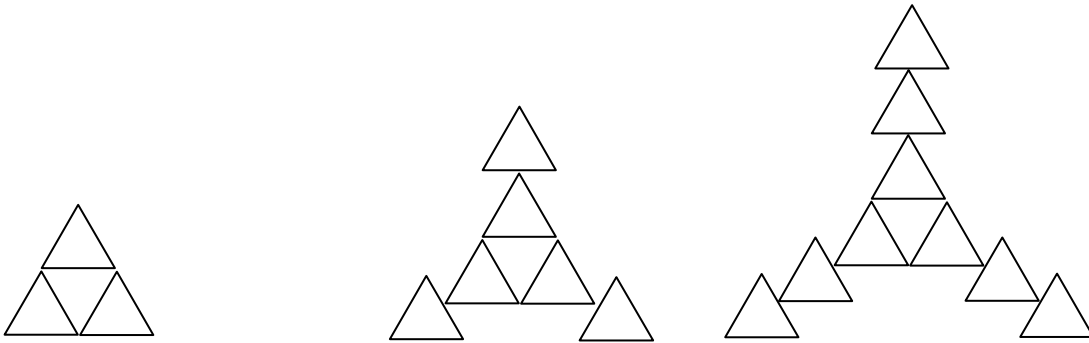


Triangle Pattern



- Make a table that shows the number of triangles for each design.
- Describe (in words) what Design #4 will look like.
- How many pieces are needed for the 5th design? The 20th? The 100th? Explain your reasoning.
- Write a rule that gives the total number of pieces to build Design #n.

a. #	Triangles
1 st	3
2 nd	6
3 rd	9

b. Design #4 will have three rays of four triangles each.

c. 5th – 15 triangles; 20th – 60 triangles; 100th – 300 triangles

d. Multiply the design number by three.

Gas Mileage

A car gets 23 miles per gallon of gas. It has a gas tank that holds 20 gallons. Suppose you were on a trip and had filled the tank at the start of the trip. What formula would describe the gallons left if you knew how many miles you had traveled so far?

$m = -23(g - 20)$, where $m =$ miles traveled and $g =$ gallons remaining. Solving this for g gives us: $g = \frac{m}{-23} + 20$