NAME: $\qquad$ DATE: $\qquad$ PERIOD: $\qquad$
For \#1-6, write or draw the next two terms in each sequence:

1. $1,2,4,7,11,16,22$, $\qquad$ , $\qquad$ .
-2.- January, March, Māa, July, $\qquad$ , $\qquad$ .
2. 


$\qquad$ -


6. $0.1,0.01,0.001$, $\qquad$ , $\qquad$ .

For \#7-10, make conjectures based on the patterns observed.
7. The years 1996, 2000, 2004, 2008, 2012 were all leap years.
a. Make a conjecture about leap years. $\qquad$
b. Circle the leap years: 2020, 2030, 2076, 2082, 2400
8. $0, \frac{1}{2}, \frac{3}{4}, \frac{7}{8}, \frac{15}{16}$, $\qquad$ .
9.

Figure 1
Figure 2
Figure 3


9 triangles

Figure 4


16 triangles

Based on the configurations, what would be the number of triangles in the next figure?

What would be the number of triangles in the $10^{\text {th }}$ figure?

What would be the number of triangles in the $20^{\text {th }}$ figure?
10. Use the pattern below. Each figure is make up of squares that are 1 unit by 1 unit.


The distance around (perimeter) of the first object is 4 units. The distance around the Figure 2 is 8 units. Fill in the table below.

| Figure <br> number | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Distance <br> around | 4 | 8 | 12 |  |  |  |

What would be the distance around (perimeter) of the Figure $10 ?$

