## Grade 6 Patterning Proctice Test

1. Look at the pattern below:

a. Draw the $4^{\text {th }}$ and $5^{\text {th }}$ designs in the chart above.
b. Complete the t-chart.
c. What is the pattern rule?
d. How many blocks are needed for the $10^{\text {th }}$ design?

| Design \# | Number of <br> Blocks |
| :---: | :---: |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |

2. Explain how finding the explicit rule for a pattern can save you time.
3. Find the pattern rule for the following pattern:

| Term Number | 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- |
| Term | 20 | 40 | 60 | 80 |

4. Which rule describes the pattern: 1, 3, 7, 15
a. Add 16 to get to the next term.
b. Subtract 16 to get to the next term.
c. Multiply by 2 and add 1 to get to the next term.
d. Multiply by 2 and subtract 1 to get to the next term.
5. Choose one of the following questions to solve. Circle the question you choose to answer. Show all your work!!
a. You want to enter your baking into a competition. It costs $\$ 10$ for the first entry but only $\$ 2$ for each entry after that. How much will it cost to enter 10 items?

## OR

b. The cooking instructions for rice say that 1 cup of rice takes 1.5 minutes to cook, 2 cups of rice take 3 minutes to cook and 3 cups of rice takes 4.5 minutes to cook. Payton is making a family dinner and needs to cook 12 cups of rice. How long should he cook it for?

## OR

c. Mrs. Strampel has 50 blocks. She uses 22 of these blocks to make the pattern below. How many pattern terms will Mrs. Strampel be able to complete with her 50 blocks?

6. Create a pattern of your choice where the $3^{\text {rd }}$ term is 9 .
a. Show the first 5 terms.
b. State your pattern rule.

