



Glenmore State High School


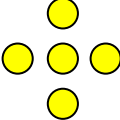
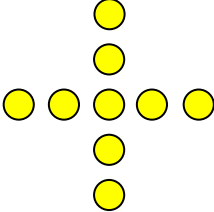
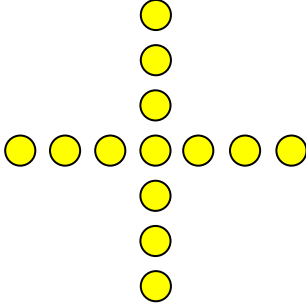
Year 7 Extended Learning Program in Mathematics



Name _____ School _____

M&MATHS

1. a. Make these patterns with your M&Ms, starting from the left. Complete the last row of the table.

| Step | 1 | 2 | 3 | 4 |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Pattern |  |  |  |  |
| Number of M&Ms | | | | |

- b. Use your pattern to complete this table.

| Step | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|
| Number | | | | | | | | | | | | |

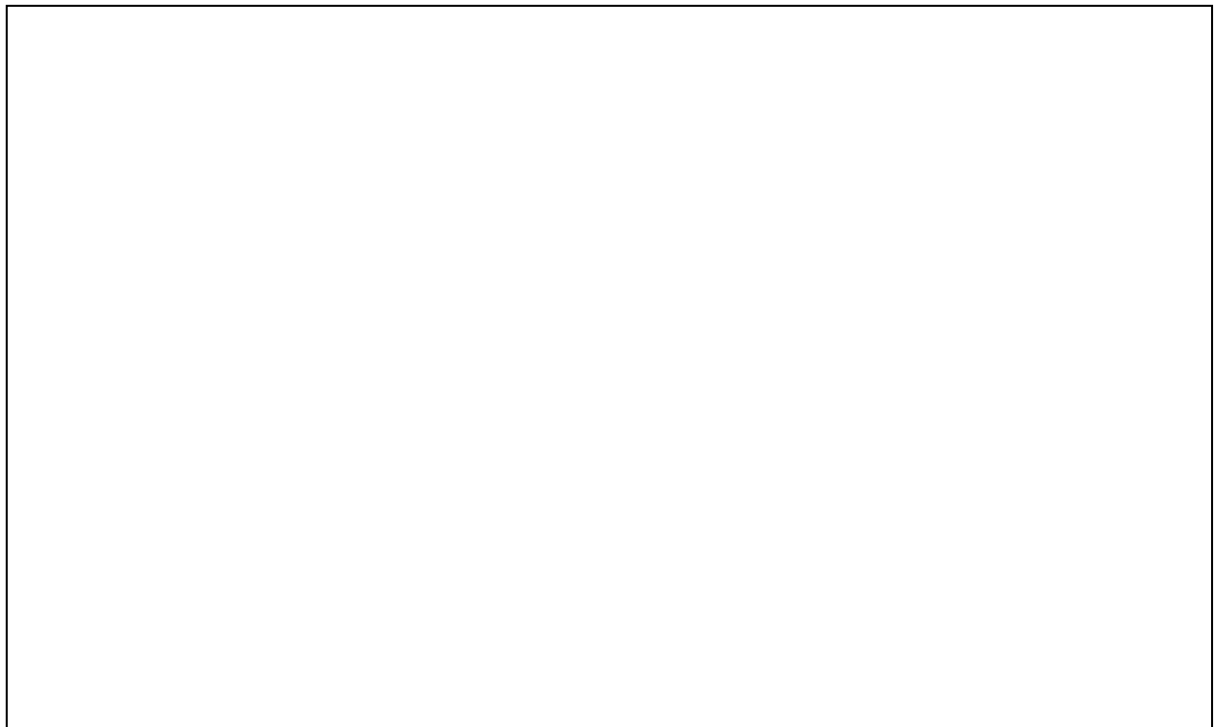
- c. Can you find the rule for the Number if you know the Step?

d. How many M&Ms would there be at the 200th step?



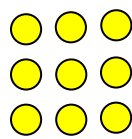
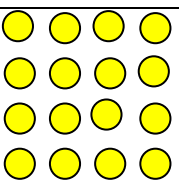
e. If I had 225 M&Ms in my pattern, which step would it be?

f. Could I have 203 M&Ms in my pattern? Explain why or why not.

g. Put your rule into a graphics calculator and draw its graph (the teacher will show you how to do this). Draw a sketch here of what you see.



2. a. Make these patterns with your M&Ms, starting from the left. Complete the last row of the table.

| Step | 1 | 2 | 3 | 4 |
|----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Pattern |  |  |  |  |
| Number of M&Ms | | | | |

- b. Use your pattern to complete this table.

| Step | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|
| Number | | | | | | | | | | | | |

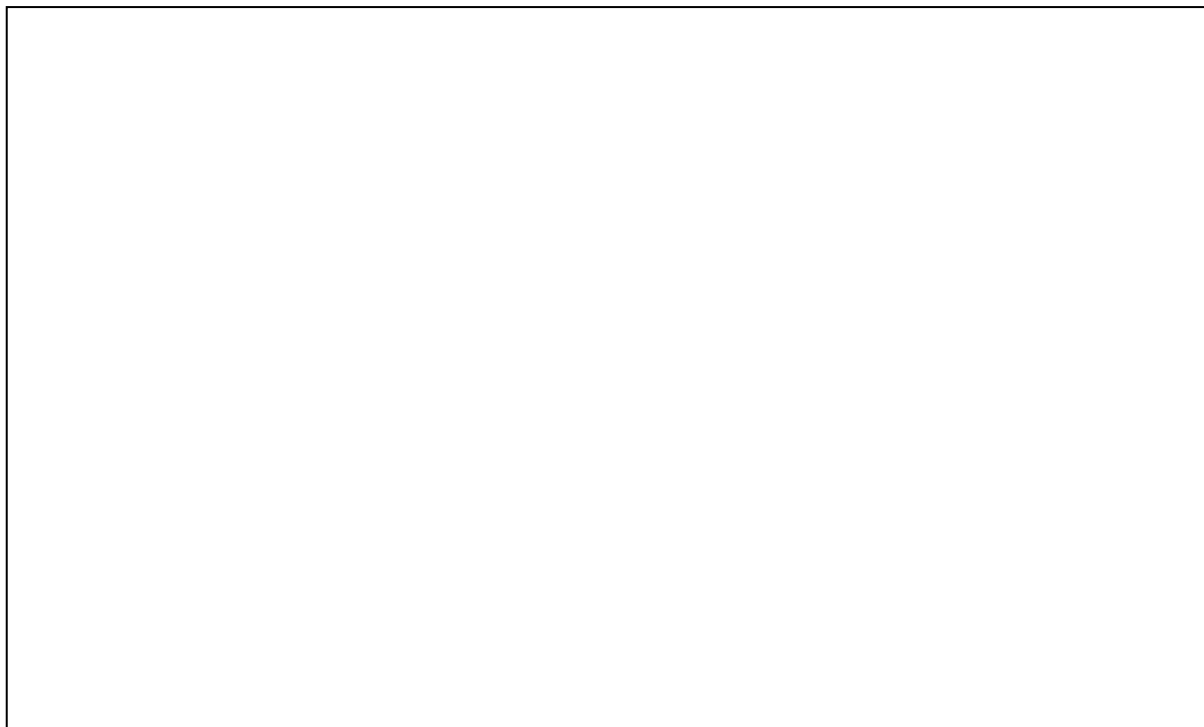
- c. Can you find the rule for finding the Number if you know the Step?

- d. How many M&Ms would there be at the 200th step?

- e. If I had 625 M&Ms in my pattern, which step would it be?

- f. Could I have 360 M&Ms in my pattern? Explain why or why not.

- g. Put your rule into a graphics calculator and draw its graph (the teacher will show you how to do this). Draw a sketch here of what you see.



3. a. Make these patterns with your M&Ms, starting from the left. Complete the last row of the table.

| Step | 1 | 2 | 3 | 4 |
|---------|--------|------------|--------------------|------------------------------------|
| Pattern | ● ● | ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| Number | | | | |

- b. Use your pattern to complete this table.

| Step | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------|---|---|---|---|---|---|---|---|
| Number | | | | | | | | |

- c. Can you find the rule for finding the Number if you know the Step?

- d. How many M&Ms would there be at the 20th step?

- e. If I had 32 768 M&Ms in my pattern, which step would it be?

- f. Put your rule into a graphics calculator and draw its graph (the teacher will show you how to do this). Draw a sketch here of what you see.



4. a. Count out 32 M&Ms and put them into a cup.
b. In the table below, record 32 as the number of M&Ms at Step 1.

| Step | 1 | 2 | 3 | 4 | 5 |
|--------|---|---|---|---|---|
| Number | | | | | |

- c. Shake them up and throw them (carefully!) onto the table.
d. Remove all of the M&Ms whose M&M logo is face down (you may eat them!)
e. Record the number of M&Ms that are left, in Step 2.
f. Repeat, until you have completed the table.

Class Discussion

- g. Did every group get the same results?
h. What "should" have happened?
i. Which groups table was closest to this?
j. If we repeated the experiment, would the same thing happen?

Finding Your Rule

The teacher will show you how to find the rule for your data, using a graphics calculator.