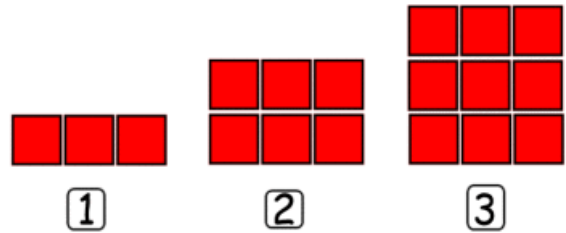


## Equations of Lines

**Pattern 1**

| Step # | # of Blocks | Differences  |
|--------|-------------|--------------|
| 1      | 3           |              |
| 2      | 6           | $6 - 3 = 3$  |
| 3      | 9           | $9 - 6 = 3$  |
| 4      | 12          | $12 - 9 = 3$ |

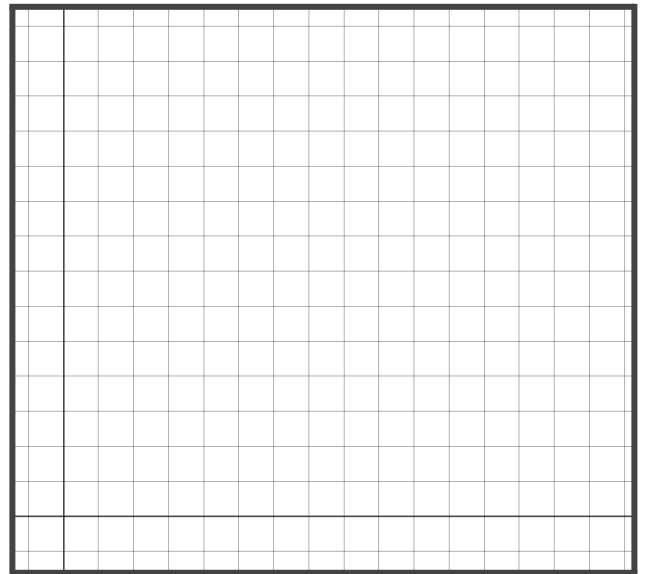


Key Characteristics

Slope:

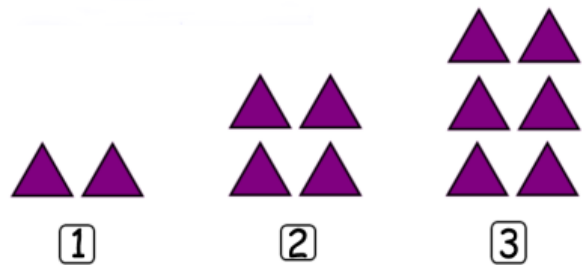
y-intercept:

Equation:



**Pattern 2**

| Step # | # of Block | Differences |
|--------|------------|-------------|
|        |            |             |
|        |            |             |
|        |            |             |
|        |            |             |



Key Characteristics

Slope:

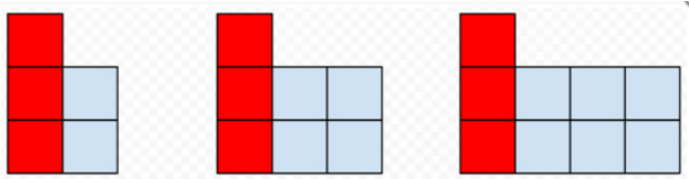
y-intercept:

Equation:



Pattern 3

| Step # | # of Blocks | Differences |
|--------|-------------|-------------|
|        |             |             |
|        |             |             |
|        |             |             |
|        |             |             |



Key Characteristics

Slope:

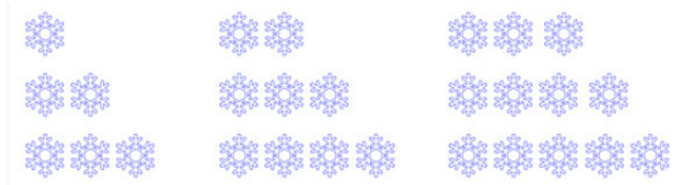
y-intercept:

Equation:



Pattern 4

| Step # | # of Block | Differences |
|--------|------------|-------------|
|        |            |             |
|        |            |             |
|        |            |             |
|        |            |             |



Key Characteristics

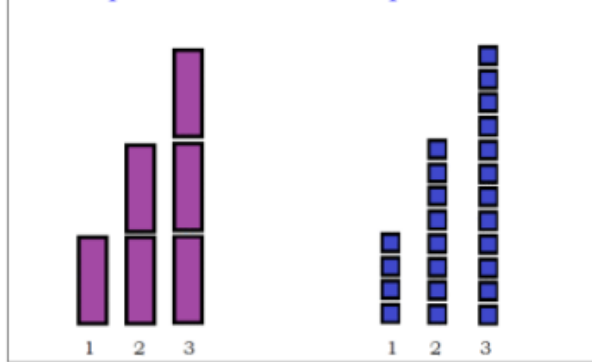
Slope:

y-intercept:

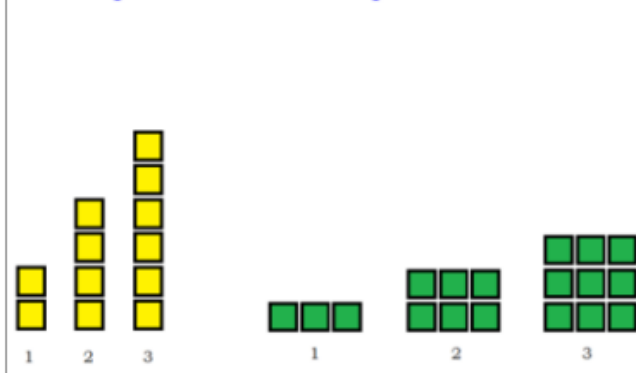
Equation:



Which pattern has the steeper trend line?



Which pattern has a steeper trend line?



Using two colours of tiles construct:

$$\text{number of tiles} = \text{position number} \times 5 + 3$$

Discuss:

1. Could there be a position 0?
2. How many tiles would be at this position?
3. Construct position 0.

On the large grid paper, create a graphical representation for each of the rules below:

$$\text{number of tiles} = \text{position number} \times 1 + 1$$

$$\text{number of tiles} = \text{position number} \times 3 + 1$$

$$\text{number of tiles} = \text{position number} \times 5 + 1$$