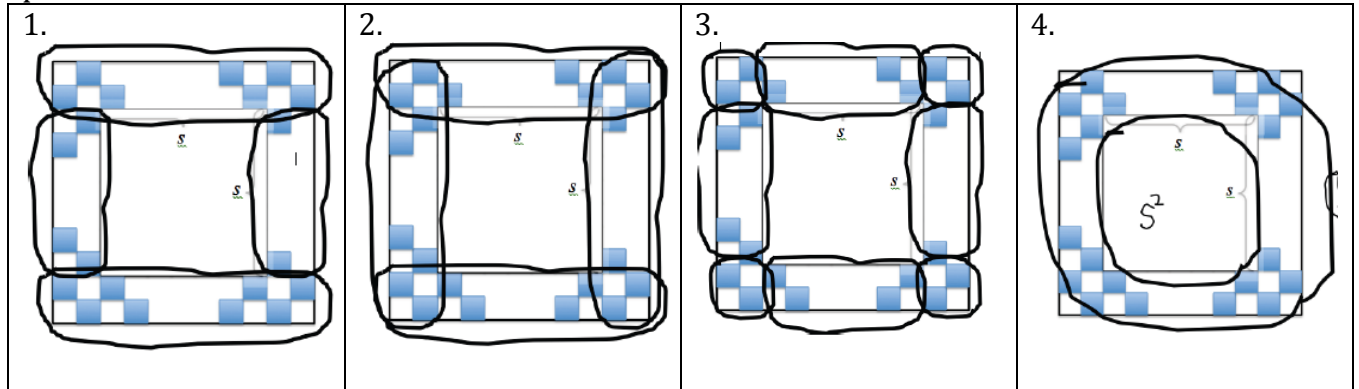# 1.1.5 – Simplifying Expressions
Practice Understanding Task _____

The following expressions represent the number of colored tiles for ANY square lunchroom with the white side length of s. Match the following expressions with the appropriate picture below.

a) $4s + 8$

c) $2s + 2(s + 4)$

b) $4(s + 4) - 8$

d) $\dfrac{(s+4)^2 - s^2}{2}$

5. Are all of the expressions above equivalent? How do you know?

6. Can you show this algebraically?

7. Why do we simplify expressions?

Determine if the following expressions are equivalent. Show your work. Remember to follow the order of operations when you are simplifying!!

8. $9(x + 4) - 3x + 1$ $\dfrac{12x + 70}{2} + 2$

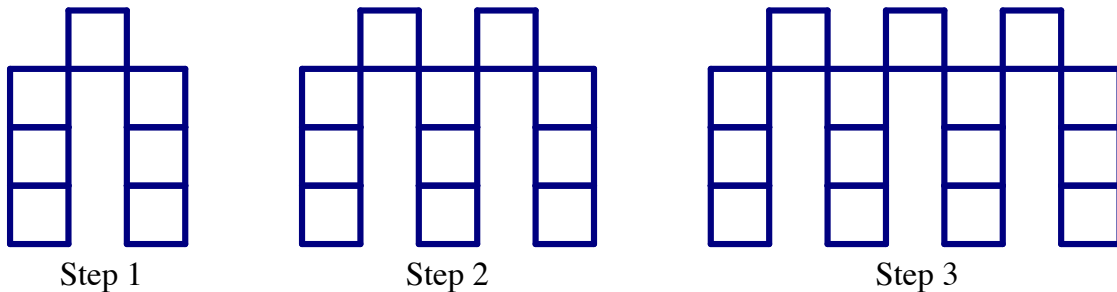9. $\dfrac{6(x + 1) - 12}{3}$ $\dfrac{6(x + 1)}{3} - 12$

10. $5x + 3$ $7x - (2x - 3)$

1.2 – Creating & Simplifying Expressions
*Practice Understanding Task*_____

The picture below shows the number of tiles needed for the first three steps of the pattern.

Step 1   Step 2   Step 3

1. Draw Step 4 below:

2. Show what is the same in each step (color or mark them all the same)

3. Show what is different in each step.

4. Develop an expression using numbers for each step above that will show what is the same, and what is different when counting the total number of tiles in each step.

5. What would your expression look like if we were on step 10?

6. Step 50?

7. If we were on step n, meaning ANY step in the pattern, what would your expression look like?

8. Connect each piece of your expression back to the picture.

Class Discussion:

9. Write down any OTHER CORRECT expressions given by classmates for the sequence of growing figures above.

10. Simplify the expressions above to show that they are equivalent.