Starburst Distributing: Distributive Property Activity
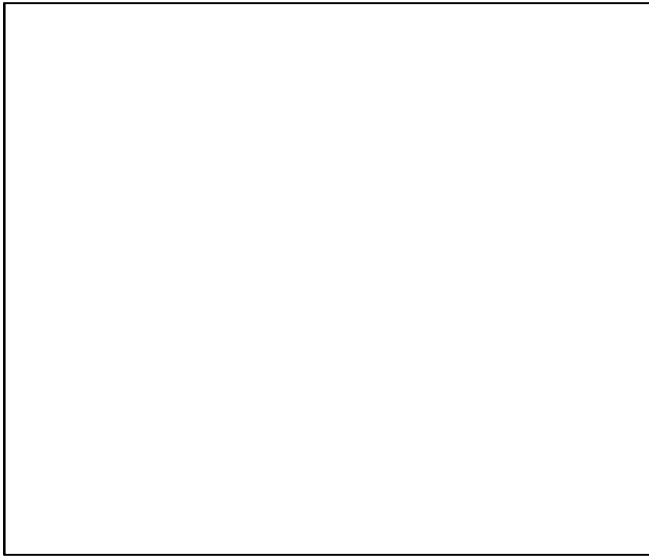
Name:_____

Date:_____ Period:_____

Directions:

1) Represent each of the following situations using Starburst's.
2) Draw a diagram inside the box for each column.
3) Then write as an algebraic expression.
4) Write out the repeated addition.
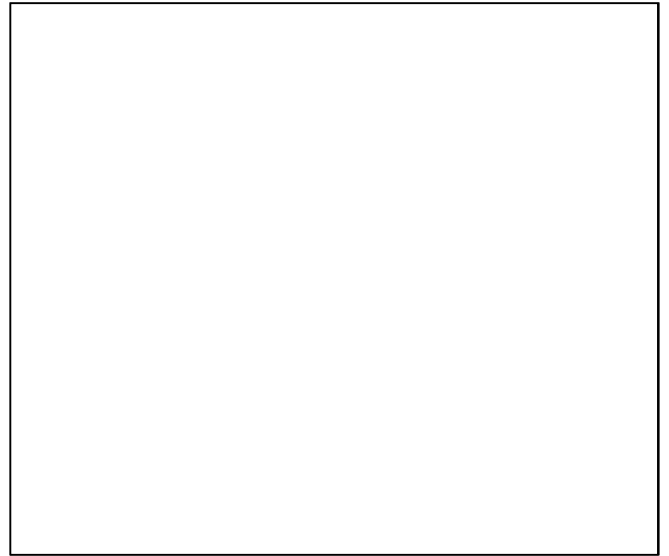5) Add the expressions.

1) **three** groups of 2 red and 1 yellow	2) **two** groups of 1 orange and 5 pink
Algebraic Expression: _____	Algebraic Expression: _____
Repeated Addition:	Repeated Addition:
+ _____	+ _____
Total: _____	Total: _____

3) **three** groups of 2 orange and 3 yellow

Algebraic Expression: _____

Repeated Addition:

+ _____

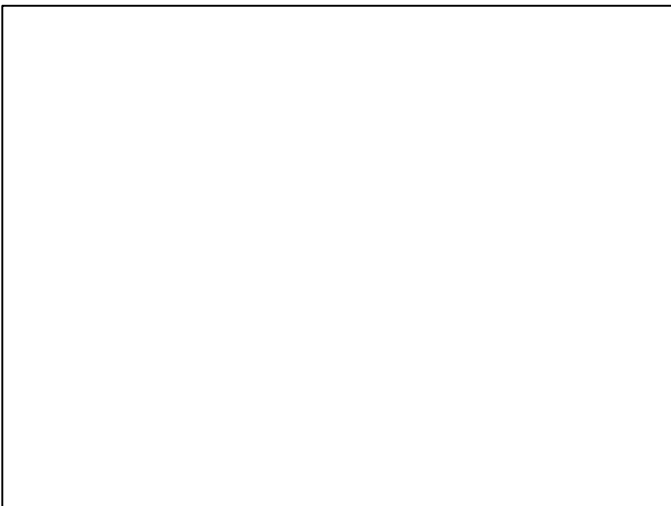Total: _____

4) **two** groups of 5 orange and 3 red

Algebraic Expression: _____

Repeated Addition:

+ _____

Total: _____

5) **twelve** groups of 6 pink and 8 yellow

Algebraic Expression: _____

Repeated Addition:

+ _____

Total: _____

Name:_____

Date:_____ Period:_____

The Distributive Property Let *a, b, c* be real numbers.		
Words	Algebra	Examples
The product of a and (b + c)	a(b + c) = ab + ac (b + c)a = ba + ca	3(4+2) = 3(4) + 3(2) (3 + 5)2 = 3(2) + 5(2)
The product of a and (b – c)	a(b – c) = ab – ac (b – c)a = ba – ca	5(6 – 4) = 5(6) – 5(4) (8 – 6)(4) = 8(4) – 6(4)

Directions: Please simplify the following expressions by using the distributive property.

1) $3(2y - 5)$

2) $2(8 + h)$

3) $(3 + 3x)(5)$

4) $7(5x + 10)$

5) $2(y - x)$

6) $(5 - 6x)(2)$

7) $2(x + 4) - 3$

8) $4(z + 8) - 3z + 2$

9) $11(2x - 1) + 4(7 - 3x)$

10) $5(c + 3a + 5t) + 8(c + 2a + 3t)$

11) A square has sides of length $3x - 10$.
    What is the perimeter of the square?

    3x - 10

12) Find the area of the rectangle.

    7x – 4

    3

LT #7: I can apply the properties of operations to generate equivalent expressions.
LT #8: I can identify when two expressions are equivalent.

Directions: Apply the distributive property to simplify the following expressions. Find the product of each of the following **using the distributive property**:

1) 14 x 35   2) 7(70 + 8)   3) 8(352)

Directions: Apply the distributive property to simplify the following expressions.

4) 12(z + 7) + 6   5) (g – 2)11   6) 3(5c + 2d + 12)

7) 3(2x + 4 + 5y) + 10   8) 7(4p + 6r – b) + 4r + 12p
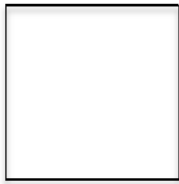
Directions: Combine like terms to simplify.

9) 2h + 3b + 6 + 5h – 2b + h   10) 2xy + x + r + 5xy + 3x

11) 12 + 3h – 4 + 16y – 2y + 4h

12) Find the **perimeter** of the square pictured below *__using the distributive property.__*

Perimeter = _____

$k + 6$

$k + 6$

13) Find the area and the perimeter of the rectangle pictured below using the distributive property. Don't forget to write the formulas first.

Area = _____

12

$3k + 5$

Perimeter = _____

Bonus:

1) Find the **area and perimeter** of the rectangle pictured below **using the distributive property**.

$k + 1$

$k + 5$