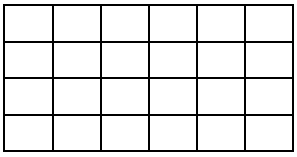
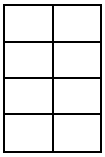
Scenario C: Problem: 4(2+3+1)

Model 1: 4 rows of 2+3+1

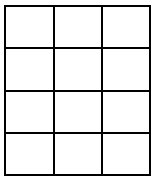


$\longrightarrow 4(2+3+1) = 4(6) = 24$

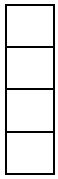
Model 2: 4 rows of 2 + 4 rows of 3 + 3 rows of 1



$4(2) +$



$4(3) +$



$4(1)$

$4(2)+4(3)+4(1) =$ ____ + ____ + ____ = _____

Questions

1. What is the same in both models?

Both models have _____.

2. What is different about the two models?

Model 1 has _____, but model 2 _____.

3. Is $4(2+3+1) = 4(2) + 4(3) + 4(1)$? Why or why not?

_____ (yes or no) because _____.

Directions: For scenario D, following the examples above, draw both the picture for models 1 and 2 and write the corresponding math sentences.

Scenario D: 5(4+2)

Model 1: _____ rows of _____.

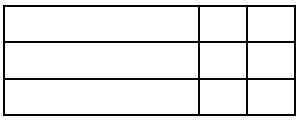
5(4+2) = _____ = _____

Model 2: _____ rows of _____ + _____ rows of _____.

5(4+2) = 5(__) + 5(__) = _____ + _____ = _____

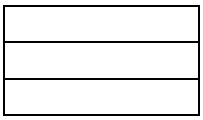
Scenario E: 3(x+2)

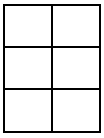
Model 1: 3 rows of x+2



→ 3(x+2) = _____

Model 2: 3 rows of x + 3 rows of 2



3(x) +  3(2) 3(x+2) = 3(x) + 3(2) = _____

Questions

1. What is the same in both models?

Both models have _____.

2. What is different about the two models?

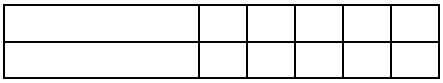
Model 1 has _____, but model 2 _____.

3. Is 3(x+2) = 3(x) + 3(2)? Why or why not?

_____ (yes or no) because _____.

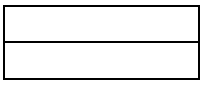
Scenario F: 2(x+5)

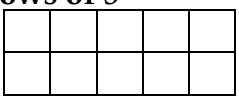
Model 1: 2 rows of x+5



→ 2(x+5) = _____

Model 2: 2 rows of x + 2 rows of 5



2(x) +  2(5) 2(x+5) = 2(x) + 2(5)= _____

Questions

1. What is the same in both models?

Both models have _____.

2. What is different about the two models?

Model 1 has _____, but model 2 _____.

3. Is 2(x+5) = 2(x) + 2(5)? Why or why not?

_____ (yes or no) because _____.

Directions: For scenario G, following the examples above, draw both the picture for models 1 and 2 and write the corresponding math sentences.

Scenario G: 4(x+1)

Model 1: _____ rows of _____.

4(x+1) = _____

Model 2: _____ rows of _____ + _____ rows of _____.

4(x+1) = 4(x) + 4(1) = _____

Summary Questions: Distributive Property

1. Complete this equation: a (b + c) = a(__) + a(__). This is called the **Distributive Property of Multiplication over Addition.**

2. Describe the **Distributive Property of Multiplication over Addition** in your own words.

The **Distributive Property of Multiplication over Addition means** _____

_____.

3. Create one more example to illustrate the Distributive Property using unit and *x* tiles.

Practice Time!!! Note: 4x-3 = 4x + (-3)

1. 4(3x+1) = _____

Hint: _____ rows of _____ = _____ rows of _____ + _____ rows of _____.

2. -3(4x+2) = _____

3. -2(-5x+4) = _____

4. -(4x+2) = _____

5. -5(3x-1) = _____

6. -(x-4)

7. -2(3x-8)

8. -(3x-1)

Challenge

9) $2(2x^2 + 3x + 4)$ 10) $-(4x^2 - 3)$ 11) $-(3x^2 + 2x - 6)$