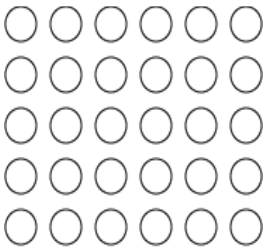
Name: _____

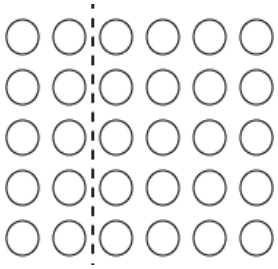
Distributive Property of Multiplication

The **Distributive Property of *Multiplication*** states that multiplying a sum by a number is the same as multiplying each addend by the number and then adding the products.

This array shows 5 x 6.



Now the array is broken into two smaller parts. They show 5 x 2 and 5 x 4.



What is 5 x 6 ?

5 x 6 = _____

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

5 x (2 + 4) = _____

You can write the multiplication fact different ways.

5 x 6 = 5 x (2 + 4) = (5 x 2) + (5 x 4)

Part 1: Write the answer to each number sentence.

a. 2 x (8 + 1) = _____

b. (6 x 3) + (6 x 7) = _____

c. 3 x (4 + 1) = _____

d. (8 x 2) + (8 x 1) = _____

e. 8 x (4 + 3) = _____

f. (12 x 1) + (12 x 0) = _____

g. 4 x (2 + 2) = _____

h. (5 x 7) + (5 x 1) = _____

i. 9 x (3 + 6) = _____

j. (1 x 99) + (1 x 1) = _____

Part 2: **Write the correct multiplication fact shown by each number sentence. Then write the product.**

example: **4 x (1 + 2)** **=** 4 x 3 = 12

k. 7 x (4 + 3) = _____

l. (6 x 2) + (6 x 1) = _____

m. 2 x (2 + 2) = _____

n. (3 x 7) + (3 x 3) = _____

o. 10 x (1 + 1) = _____

p. (8 x 3) + (8 x 6) = _____

Part 3: **Use the distributive property of multiplication to write two different number sentences for each multiplication fact shown.**

example: **4 x 5** **=** (4 x 3) + (4 x 2) = 4 x (3 + 2)

q. 4 x 11 = _____ = _____

r. 10 x 6 = _____ = _____

s. 12 x 12 = _____ = _____

t. 9 x 7 = _____ = _____

Part 4: **Cross out the number sentence in each row that is not equal to the others.**

u. 4 x 8 = 4 x (4 + 4) = (4 x 4) + (4 x 4) = (4 x 3) + (4 x 6)

v. 1 x 12 = 1 x (3 + 4) = 1 x (6 + 6) = 1 x (3 + 9)

w. 9 x 7 = (9 x 4) + (9 x 3) = (9 x 3) + (9 x 6) = (9 x 7) + (9 x 0)

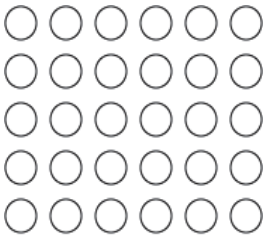
x. 6 x 3 = 6 x (1 + 2) = 6 x (2 + 1) = (6 x 2) + (6 x 2)

ANSWER KEY

Distributive Property of Multiplication

The **Distributive Property of *Multiplication*** states that multiplying a sum by a number is the same as multiplying each addend by the number and then adding the products.

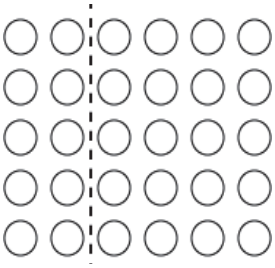
This array shows 5 x 6.



What is 5 x 6 ?

5 x 6 = **30**

Now the array is broken into two smaller parts. They show 5 x 2 = 10 and 5 x 4 = 20.



What is 10 + 20? **30**

5 x (2 + 4) = **30**

You can write the multiplication fact several different ways.

5 x 6 = 5 x (2 + 4) = 5 x (3 + 3) = 5 x (1 + 5)

Part 1: Write the answer to each number sentence.

a. 2 x (8 + 1) = **18**

b. (6 x 3) + (6 x 7) = **60**

c. 3 x (4 + 1) = **15**

d. (8 x 2) + (8 x 1) = **24**

e. 8 x (4 + 3) = **56**

f. (12 x 1) + (12 x 0) = **12**

g. 4 x (2 + 2) = **16**

h. (5 x 7) + (5 x 1) = **40**

i. 9 x (3 + 6) = **81**

j. (1 x 99) + (1 x 1) = **100**

Part 2: **Write the correct multiplication fact shown by each number sentence. Then write the product.**

example: **4 x (1 + 2)** **=** 4 x 3 = 12

k. 7 x (4 + 3) = **7 x 7 = 49**

l. (6 x 2) + (6 x 1) = **6 x 3 = 18**

m. 2 x (2 + 2) = **2 x 4 = 8**

n. (3 x 7) + (3 x 3) = **3 x 10 = 30**

o. 10 x (1 + 1) = **10 x 2 = 20**

p. (8 x 3) + (8 x 6) = **8 x 9 = 72**

Part 3: **Use the distributive property of multiplication to write a two different number sentences for each multiplication fact shown.**

example: **4 x 5** **=** (4 x 3) + (4 x 2) = 4 x (3 + 2)

ANSWER WILL VARY. SAMPLE ANSWERS GIVEN.

q. 4 x 11 = **(4 x 6) + (4 x 5)** = **4 x (6 + 5)**

r. 10 x 6 = **(10 x 3) + (10 x 3)** = **10 x (3 + 3)**

s. 12 x 12 = **(12 x 4) + (12 x 8)** = **12 x (4 + 8)**

t. 9 x 7 = **(9 x 6) + (9 x 1)** = **9 x (6 + 1)**

Part 4: **Cross out the number sentence in each row that is not equal to the others.**

u. 4 x 8 = 4 x (4 + 4) = (4 x 4) + (4 x 4) = ~~(4 x 3) + (4 x 6)~~

v. 1 x 12 = ~~1 x (3 + 4)~~ = 1 x (6 + 6) = 1 x (3 + 9)

w. 9 x 7 = (9 x 4) + (9 x 3) = ~~(9 x 3) + (9 x 6)~~ = (9 x 7) + (9 x 0)

x. 6 x 3 = 6 x (1 + 2) = 6 x (2 + 1) = ~~(6 x 2) + (6 x 2)~~