Name: _____

Date: _____

The Distributive Property Pattern

Instructions: Each of these equations shows the basic pattern of the distributive property. Fill in the missing numbers to complete the pattern and make the equation true.

1 $8 \times (3 + 10) = \boxed{8} \times 3 + \boxed{8} \times 10$

2 $3 \times (7 + 9) = 3 \times \boxed{} + 3 \times \boxed{}$

3 $5 \times (12 - 6) = 5 \times \boxed{} - \boxed{} \times 6$

4 $7 \times (4 + 8) = \boxed{} \times 4 + 7 \times \boxed{}$

5 $11 \times (3 - 2) = 11 \times 3 - 11 \times \boxed{}$

6 $\boxed{} \times (5 - \boxed{}) = 6 \times 5 - 6 \times 3$

7 $\boxed{} \times (\boxed{} + 8) = 8 \times 3 + 8 \times 8$

8 $5 \times (7 - 4) = 5 \times \boxed{} - 5 \times 4$

9 $\boxed{} \times (10 + 12) = 9 \times 10 + 9 \times 12$

10 $10 \times (\boxed{} + \boxed{}) = 10 \times 2 + 10 \times 7$

11 $2 \times (\boxed{} - 13) = 2 \times 15 - 2 \times 13$

12 $4 \times (9 + 5) = \boxed{} \times 9 + \boxed{} \times 5$

Name: _____

Date: _____

Simplifying Expressions Two Different Ways

Instructions: Simplify each expression two different ways. In the first way, simplify what is inside the group first. In the second way, use the distributive property to eliminate the group. You should get the same answer both ways. Be sure to show your work!

Way 1: Group First	**Way 2: The Distributive Property**

1

$5 \times (8 + 2)$ $\qquad\qquad$ $5 \times (8 + 2)$

5×10 $\qquad\qquad\qquad$ $5 \times 8 + 5 \times 2$

$\boxed{50}$ $\qquad\qquad\qquad\qquad$ $40 + 10$

same answer both ways $\qquad$ $\boxed{50}$

2 $\quad 3 \times (7 + 5)$ $\qquad\qquad\qquad$ $3 \times (7 + 5)$

3 $\quad 10 \times (12 - 4)$ $\qquad\qquad$ $10 \times (12 - 4)$

4 $\quad 6 \times (2 + 5 + 1)$ $\qquad\qquad$ $6 \times (2 + 5 + 1)$

5 $\quad 4 \times (10 - 3 + 2)$ $\qquad\qquad$ $4 \times (10 - 3 + 2)$

▶ **The Distributive Property in Arithmetic • mathantics.com**

Simplifying Expressions with the Distributive Property

Instructions: Use the Distributive Property to simplify each of these expressions. Be sure to show all your work.

1 $3 \times (7 + 4)$

$3 \times 7 + 3 \times 4$

$21 + 12$

$\boxed{33}$

2 $10 \times (3 + 5)$

3 $2 \times (7 + 5)$

4 $7 \times (5 - 1)$

5 $3 \times (12 + 10)$

6 $4 \times (9 + 5)$

7 $5 \times (6 + 5 - 1)$

8 $6 \times (10 - 6 - 4)$

9 $12 \times (10 - 5 + 2)$

10 $8 \times (2 + 3 + 4)$

Name: _____

Date: _____

Using the Distributive Property to Multiply - Set 1

Instructions: Use the Distributive Property to rearrange these multiplication problems so they are easier to do mentally. Then simplify them to get a final answer.

1 7×32

$7 \times (30 + 2)$

$7 \times 30 + 7 \times 2$

$210 + 14$

$\boxed{224}$

2 4×26

3 5×132

4 8×54

5 9×41

6 2×734

7 6×65

8 4×456

Using the Distributive Property to Multiply - Set 2

Instructions: Use the Distributive Property to rearrange these multiplication problems so they are easier to do mentally. Then simplify them to get a final answer.

1 9×43

$9 \times (40 + 3)$

$9 \times 40 + 9 \times 3$

$360 + 27$

$\boxed{387}$

2 6×58

3 3×97

4 5×28

5 7×84

6 3×615

7 2×843

8 4×722

▶ **The Distributive Property in Arithmetic • mathantics.com**

The Distributive Property in Arithmetic

1 Fill in the blanks to make this equation true.

$$5 \times (8 + 3) = \boxed{} \times 8 + \boxed{} \times 3$$

2 Fill in the blanks to make this equation true.

$$6 \times (12 - 9) = 6 \times \boxed{} - 6 \times \boxed{}$$

3 Use the Distributive Property to simplify this expression. (Show your work!)

$$3 \times (8 + 10)$$

4 Use the Distributive Property to simplify this expression. (Show your work!)

$$7 \times (11 - 5)$$

5 Use the Distributive Property to simplify this expression. (Show your work!)

$$4 \times (3 + 9 - 2)$$

6 Use the Distributive Property to rearrange this multiplication problem so it is easier to do mentally. Then simplify it.

$$5 \times 29$$

7 Use the Distributive Property to rearrange this multiplication problem so it is easier to do mentally. Then simplify it.

$$8 \times 82$$

8 Use the Distributive Property to rearrange this multiplication problem so it is easier to do mentally. Then simplify it.

$$3 \times 158$$

Math Antics
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Name: _____

Date: _____

The Distributive Property Pattern

Instructions: Each of these equations shows the basic pattern of the distributive property. Fill in the missing numbers to complete the pattern and make the equation true.

1 $8 \times (3 + 10) = \boxed{8} \times 3 + \boxed{8} \times 10$

2 $3 \times (7 + 9) = 3 \times \boxed{7} + 3 \times \boxed{9}$

3 $5 \times (12 - 6) = 5 \times \boxed{12} - \boxed{5} \times 6$

4 $7 \times (4 + 8) = \boxed{7} \times 4 + 7 \times \boxed{8}$

5 $11 \times (3 - 2) = 11 \times 3 - 11 \times \boxed{2}$

6 $\boxed{6} \times (5 - \boxed{3}) = 6 \times 5 - 6 \times 3$

7 $\boxed{8} \times (\boxed{3} + 8) = 8 \times 3 + 8 \times 8$

8 $5 \times (7 - 4) = 5 \times \boxed{7} - 5 \times 4$

9 $\boxed{9} \times (10 + 12) = 9 \times 10 + 9 \times 12$

10 $10 \times (\boxed{2} + \boxed{7}) = 10 \times 2 + 10 \times 7$

11 $2 \times (\boxed{15} - 13) = 2 \times 15 - 2 \times 13$

12 $4 \times (9 + 5) = \boxed{4} \times 9 + \boxed{4} \times 5$

Math Antics®
Worksheets

Name:

Date:

Simplifying Expressions Two Different Ways

Instructions: Simplify each expression two different ways. In the first way, simplify what is inside the group first. In the second way, use the distributive property to eliminate the group. You should get the same answer both ways. Be sure to show your work!

Way 1: Group First	Way 2: The Distributive Property

1

$5 \times (8 + 2)$

5×10

$\boxed{50}$

$5 \times (8 + 2)$

$5 \times 8 + 5 \times 2$

$40 + 10$

$\boxed{50}$

same answer both ways

2

$3 \times (7 + 5)$

3×12

$\boxed{36}$

$3 \times (7 + 5)$

$3 \times 7 + 3 \times 5$

$21 + 15$

$\boxed{36}$

3

$10 \times (12 - 4)$

10×8

$\boxed{80}$

$10 \times (12 - 4)$

$10 \times 12 - 10 \times 4$

$120 - 40$

$\boxed{80}$

4

$6 \times (2 + 5 + 1)$

6×8

$\boxed{48}$

$6 \times (2 + 5 + 1)$

$6 \times 2 + 6 \times 5 + 6 \times 1$

$12 + 30 + 6$

$42 + 6$

$\boxed{48}$

5

$4 \times (10 - 3 + 2)$

$4 \times (7 + 2)$

4×9

$\boxed{36}$

$4 \times (10 - 3 + 2)$

$4 \times 10 - 4 \times 3 + 4 \times 2$

$40 - 12 + 8$

$28 + 8$

$\boxed{36}$

▶ **The Distributive Property in Arithmetic • mathantics.com**

Name:

Date:

Simplifying Expressions with the Distributive Property

Instructions: Use the Distributive Property to simplify each of these expressions. Be sure to show all your work.

1 $3 \times (7 + 4)$
$3 \times 7 + 3 \times 4$
$21 + 12$
$\boxed{33}$

2 $10 \times (3 + 5)$
$10 \times 3 + 10 \times 5$
$30 + 50$
$\boxed{80}$

3 $2 \times (7 + 5)$
$2 \times 7 + 2 \times 5$
$14 + 10$
$\boxed{24}$

4 $7 \times (5 - 1)$
$7 \times 5 - 7 \times 1$
$35 - 7$
$\boxed{28}$

5 $3 \times (12 + 10)$
$3 \times 12 + 3 \times 10$
$36 + 30$
$\boxed{66}$

6 $4 \times (9 + 5)$
$4 \times 9 + 4 \times 5$
$36 + 20$
$\boxed{56}$

7 $5 \times (6 + 5 - 1)$
$5 \times 6 + 5 \times 5 - 5 \times 1$
$30 + 25 - 5$
$55 - 5$
$\boxed{50}$

8 $6 \times (10 - 6 - 4)$
$6 \times 10 - 6 \times 6 - 6 \times 4$
$60 - 36 - 24$
$24 - 24$
$\boxed{0}$

9 $12 \times (10 - 5 + 2)$
$12 \times 10 - 12 \times 5 + 12 \times 2$
$120 - 60 + 24$
$60 + 24$
$\boxed{84}$

10 $8 \times (2 + 3 + 4)$
$8 \times 2 + 8 \times 3 + 8 \times 4$
$16 + 24 + 32$
$40 + 32$
$\boxed{72}$

Math Antics
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Name: _____

Date: _____

Using the Distributive Property to Multiply - Set 1

Instructions: Use the Distributive Property to rearrange these multiplication problems so they are easier to do mentally. Then simplify them to get a final answer.

1 7×32

$7 \times (30 + 2)$

$7 \times 30 + 7 \times 2$

$210 + 14$

$\boxed{224}$

2 4×26

$4 \times (20 + 6)$

$4 \times 20 + 4 \times 6$

$80 + 24$

$\boxed{104}$

3 5×132

$5 \times (100 + 30 + 2)$

$5 \times 100 + 5 \times 30 + 5 \times 2$

$500 + 150 + 10$

$\boxed{660}$

4 8×54

$8 \times (50 + 4)$

$8 \times 50 + 8 \times 4$

$400 + 32$

$\boxed{432}$

5 9×41

$9 \times (40 + 1)$

$9 \times 40 + 9 \times 1$

$360 + 9$

$\boxed{369}$

6 2×734

$2 \times (700 + 30 + 4)$

$2 \times 700 + 2 \times 30 + 2 \times 4$

$1,400 + 60 + 8$

$\boxed{1,468}$

7 6×65

$6 \times (60 + 5)$

$6 \times 60 + 6 \times 5$

$360 + 30$

$\boxed{390}$

8 4×456

$4 \times (400 + 50 + 6)$

$4 \times 400 + 4 \times 50 + 4 \times 6$

$1,600 + 200 + 24$

$\boxed{1,824}$

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Using the Distributive Property to Multiply - Set 2

Instructions: Use the Distributive Property to rearrange these multiplication problems so they are easier to do mentally. Then simplify them to get a final answer.

1 9×43

$9 \times (40 + 3)$

$9 \times 40 + 9 \times 3$

$360 + 27$

$\boxed{387}$

2 6×58

$6 \times (50 + 8)$

$6 \times 50 + 6 \times 8$

$300 + 48$

$\boxed{348}$

3 3×97

$3 \times (90 + 7)$

$3 \times 90 + 3 \times 7$

$270 + 21$

$\boxed{291}$

4 5×28

$5 \times (20 + 8)$

$5 \times 20 + 5 \times 8$

$100 + 40$

$\boxed{140}$

5 7×84

$7 \times (80 + 4)$

$7 \times 80 + 7 \times 4$

$560 + 28$

$\boxed{588}$

6 3×615

$3 \times (600 + 10 + 5)$

$3 \times 600 + 3 \times 10 + 3 \times 5$

$1,800 + 30 + 15$

$\boxed{1,845}$

7 2×843

$2 \times (800 + 40 + 3)$

$2 \times 800 + 2 \times 40 + 2 \times 3$

$1,600 + 80 + 6$

$\boxed{1,686}$

8 4×722

$4 \times (700 + 20 + 2)$

$4 \times 700 + 4 \times 20 + 4 \times 2$

$2,800 + 80 + 8$

$\boxed{2,888}$

Name: _____

Date: _____

The Distributive Property in Arithmetic

1 Fill in the blanks to make this equation true.

$$5 \times (8 + 3) = \boxed{5} \times 8 + \boxed{5} \times 3$$

2 Fill in the blanks to make this equation true.

$$6 \times (12 - 9) = 6 \times \boxed{12} - 6 \times \boxed{9}$$

3 Use the Distributive Property to simplify this expression. (Show your work!)

$$3 \times (8 + 10)$$

$3 \times 8 + 3 \times 10$

$24 + 30$

$\boxed{54}$

4 Use the Distributive Property to simplify this expression. (Show your work!)

$$7 \times (11 - 5)$$

$7 \times 11 - 7 \times 5$

$77 - 35$

$\boxed{42}$

5 Use the Distributive Property to simplify this expression. (Show your work!)

$$4 \times (3 + 9 - 2)$$

$4 \times 3 + 4 \times 9 - 4 \times 2$

$12 + 36 - 8$

$48 - 8$

$\boxed{40}$

6 Use the Distributive Property to rearrange this multiplication problem so it is easier to do mentally. Then simplify it.

$$5 \times 29$$

$5 \times (20 + 9)$

$5 \times 20 + 5 \times 9$

$100 + 45$

$\boxed{145}$

7 Use the Distributive Property to rearrange this multiplication problem so it is easier to do mentally. Then simplify it.

$$8 \times 82$$

$8 \times (80 + 2)$

$8 \times 80 + 8 \times 2$

$640 + 16$

$\boxed{656}$

8 Use the Distributive Property to rearrange this multiplication problem so it is easier to do mentally. Then simplify it.

$$3 \times 158$$

$3 \times (100 + 50 + 8)$

$3 \times 100 + 3 \times 50 + 3 \times 8$

$300 + 150 + 24$

$\boxed{474}$

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See Video for step-by-step solutions to each problem.