

Do Now:
Evaluate the expressions below. What do you notice?

- $4(16+3)$ 76
- $4(16)+4(3)$ 76
- $5(27+2)$ 125
- $5(27)+5(2)$ 125

Distributive Property

Sep 29-9:07 PM

39, 34, 35

(34) 360 sec. to min.
 $\frac{360 \text{ sec.}}{1} \cdot \frac{1 \text{ min.}}{60 \text{ sec.}} = 6 \text{ min.}$

(35) $432 \text{ in}^2 \text{ to ft}^2$
 $\frac{432 \text{ in}^2}{1} \cdot \frac{1 \text{ ft}^2}{144 \text{ in}^2} = 3 \text{ ft}^2$

(39) $A = 2808 \text{ ft}^2 \text{ to yd}^2$
 $1 \text{ yd} = 3 \text{ ft}$
 $1 \text{ yd}^2 = 9 \text{ ft}^2$
 $\frac{2808 \text{ ft}^2}{1} \cdot \frac{1 \text{ yd}^2}{9 \text{ ft}^2} = 312 \text{ yd}^2$

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2.2 The Distributive Property

7.NS
7.EE

- SWBAT use the distributive property to evaluate and to write an equivalent variable expression.
- SWBAT create, evaluate, and simplify algebraic expressions involving variables.

Calculators: No

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Who wants an 8?

$8(5+3)$

To distribute means to give out

$8(5) + 8(3)$
 $40 + 24$
 64

Sep 27-5:24 PM

The Distributive Property

$a(b + c) = ab + ac$
 $(b + c)a = ab + ac$

$a(b - c) = ab - ac$
 $(b - c)a = ab - ac$

Sep 22-10:04 AM

To distribute in math means to give to each number

$8(5 + 3)$

$8(5 + 3) = 8(5) + 8(3)$

Sep 29-9:10 PM

Use the distributive property to evaluate the expression.

a) $2(6 + 14)$ $2(6) + 14$ No!
 $2(6) + 2(14)$
 $12 + 28$
 40

b) $(7 - 3)40$ $40(7 - 3)$
 $40(7) - 40(3)$ $40(7) - 40(3)$
 $280 - 120$
 160

$x \cdot y$ $y \cdot x$
 $a(\underline{b \cdot c})$ $(\underline{b \cdot c})a$

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c) $2(3 - 4)$
 -2

d) $(80 + 10)30$
 2700

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With variables....

e) $7(3x + c)$
 $7(3x) + 7(c)$
 $21x + 7c$

f) $y(4 - 2)$
 $y(4) - y(2)$
 $4y - 2y = 2y$

g) $x(2x - 3)$
 $x(2x) - x(3)$
 $2x^2 - 3x$

$(2x)^2 = 2^2 \cdot x^2 = 4x^2$
 $2x^2 = (2 \cdot x^2)$
 $2x^2 = 2 \cdot x \cdot x$
 $2x^2 \neq 4x$ No!

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h) $7x(3 - 2)$ $7x$

i) $x(2 - e)$ $2x - xe$ or $2x - ex$

j) $-9y(3 - z)$ $-27y + 9yz$

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With negatives.... **Note: follow the integer rules!**

k) $-2(2 + 3)$ -10

l) $-3(-4 + 2)$ $=6$

m) $3(-5 - 4)$ -27

n) $-2(-2 - (-3))$ $= -2$


o) $4(9 - (-8))$ 68

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You can use the distributive property to help you multiply faster.

Ex. 17×6 Think instead $10 \times 6 + 7 \times 6$

$60 + 42 = 102$



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Try these:

a) $7 * 23$

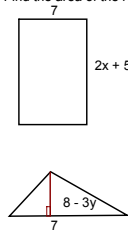
b) $6 * 14$

c) $5 (103)$

d) $9 (204)$

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Find the area of the rectangle or triangle:



$A = l \cdot w$
 $A = 7(2x + 5)$
 $= 7(2x) + 7(5)$
 $= 14x + 35$

$A = \frac{1}{2} b \cdot h$
 $= \frac{1}{2} (7)(8 - 3y)$
 $= \frac{1}{2} [7(8) - 7(3y)]$
 $= \frac{1}{2} [56 - 21y]$
 $= \frac{1}{2} (56) - \frac{1}{2} (21y)$
 $= \frac{56}{2} - \frac{21y}{2}$
 $= 28 - \frac{21y}{2}$

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Exit Pass 2.2

1. Are $2(x + 1)$ and $2x + 1$ equivalent variable expressions? Explain.



Sep 18-11:14 AM

"Don't blame the sea if you cannot catch a fish."

Working individually or with a partner, complete the worksheet.



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Reflection of Today's Lesson

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Homework

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