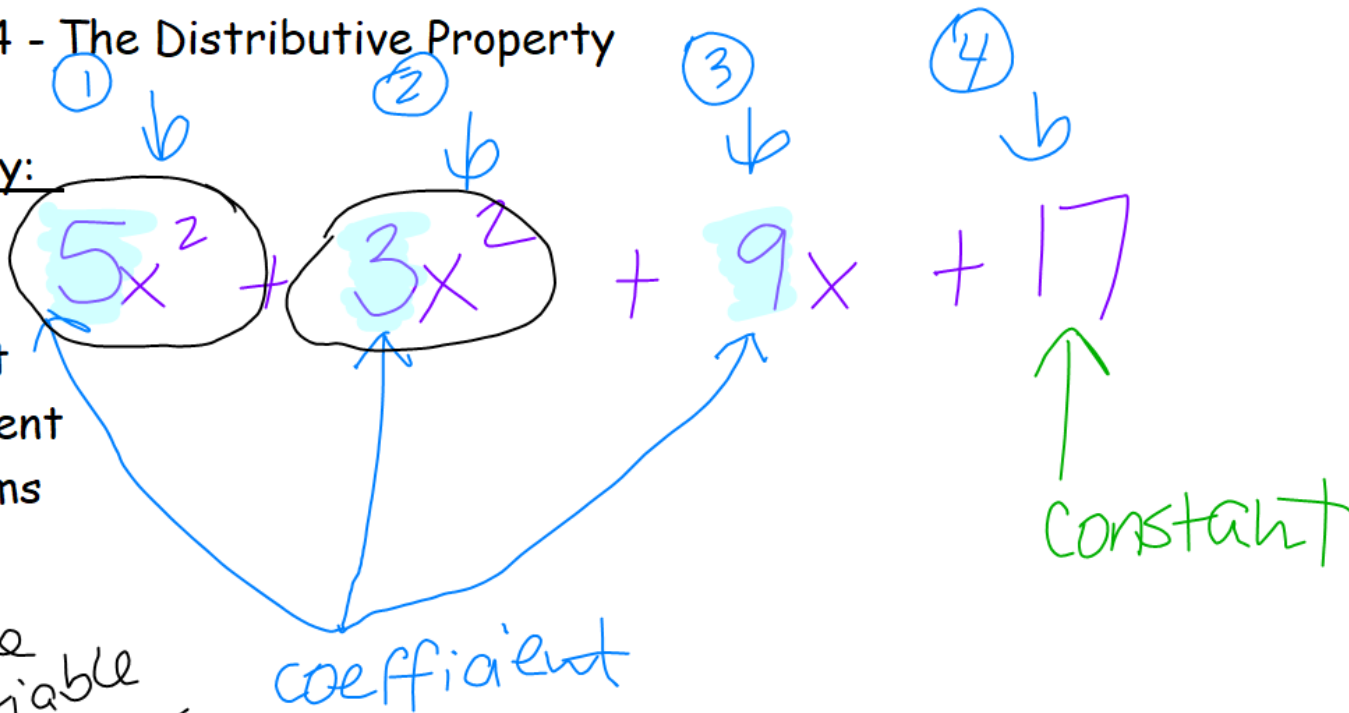


2.4 - The Distributive Property

Vocabulary:

- Term
- Constant
- Coefficient
- Like Terms

↓
same
variable
& power



1 EXAMPLE

Use the Distributive Property to simplify 26(98).

$$26(100 - 2)$$

$$26 \cdot 100 - 26 \cdot 2$$

$$2,600 - 52$$

$$2,548$$

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Simplify each expression using the Distributive Property.

#3. $11(499)$

#7. $41(502)$

$$41(500 + 2)$$

$$20500 + 82$$

$$20,582$$

2 EXAMPLE Find the total cost of 4 CDs that cost \$12.99 each.

$$\begin{aligned} & 4(12.99) \\ & 4(13 - 0.01) \\ & 52 - 0.04 \\ & \boxed{\$51.96} \end{aligned}$$

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#13. The school librarian got money to buy reference works on CDs. To find the cost of c of n CDs, she used the function $c = 32.99n$. How much did she spend on 3 CDs?

$$c = 32.99 \cdot 3$$

$$c = 3 \cdot 32.99$$
$$= 3(33 - 0.01)$$

$$= 99 - 0.03$$

$$= \$98.97$$

3 EXAMPLESimplify $3(4m - 7)$.

$$\rightarrow 3 \cdot 4m - 3 \cdot 7$$

$$\boxed{12m - 21}$$

pg. 82

Simplify each expression.

$$\# 17. \quad 3(m+4) = 3m+12$$

$$\# 23. \quad (8-3r) \frac{5}{16}$$

$$18. \quad \frac{5}{16} - 3r \cdot \frac{5}{16}$$

$$\frac{5}{2} - \frac{15r}{16}$$

$$\boxed{\frac{5}{2} - \frac{15r}{16}}$$

4 EXAMPLE Simplify $-(5q - 6)$.

$$-5q + 6$$

pg. 82

Simplify each expression.

$$\# 29. \quad -\overbrace{(3+x)}^{\text{}} = -3-x \quad \text{or} \quad -3 + -x$$

$$\# 33. \quad -\overbrace{(2-7x)}^{\text{}} = -2+7x$$

5 EXAMPLE Simplify $-2w^2 + 1w^2$.

$$-1w^2$$

or

$$-w^2$$

pg. 82

Simplify each expression.

$$\#37. \quad \underline{9x} - \underline{2x} = 7x$$

$$\#39. \quad \underline{-18v^2} + \underline{23v^2}$$
$$5v^2$$

6 EXAMPLE

Write an expression for the product of -6 and the quantity $(7$
minus m .)

$$-6 \cdot (7 - m)$$

$$-6(7 - m)$$

pg. 82

Write an expression for each phrase.

43. 3 times the quantity m minus 7.

$$3(m-7)$$

or

$$(m-7)3$$

Homework Problems:

pg. 82-83 #59, 62, 71, 77, 99, 103