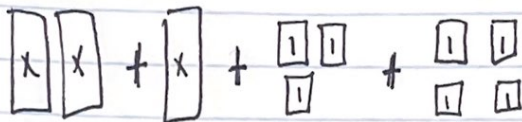


Ch. 5.6 Add Linear Expressions

Objective: To add linear expressions

Linear	Nonlinear
$5x$	$5mn$
$3x+2$	$3x^3+2$
$x-7$	x^4-7

Ex. 1 Add $(2x+3)+(x+4)$



Model with tiles

$$2x + 1x + 3 + 4$$

$$= 3x + 7$$

Ex. 2 Add $(2x-1)+(x-5)$

$$(2x-1)+(x-5) = [2x+(-1)] + [x+(-5)] \quad \text{Rewrite as addition.}$$

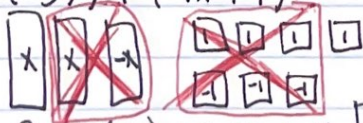
Write as

$$\begin{array}{r} 2x + (-1) \\ + 1x + (-5) \\ \hline 3x + (-6) \end{array}$$

$$= 3x + (-6) \text{ or } 3x - 6$$

Ex. 3 Find $(2x-3)+(-x+4)$. Use a model.

$$(2x+(-3)) + (-1x+4)$$



$$2x + (-1x) + (-3) + 4 = x + 1$$

Ex. 4 Find $5(x-4) + (2x-7)$

$$5(x-4) = (5 \cdot x - 5 \cdot 4) = 5x - 20$$

$$(5x - 20) + (2x - 7) = [5x + (-20)] + [2x + (-7)]$$

$$\begin{array}{r} 5x + (-20) \\ + 2x + (-7) \\ \hline 7x + (-27) \end{array} = \boxed{7x + (-27) \text{ or } 7x - 27}$$