

1.5 Modeling the
Distributive Property

$$a(b+c)$$

$$ab+ac$$

$$5(10+2)$$

$$5 \cdot 10 + 5 \cdot 2$$

$$12(y+3)$$

$$12y + 12 \cdot 3$$

$$x(y+z)$$

$$xy + xz$$

$$x(3+y)$$

$$3 \cdot x + x \cdot y$$

$$15 \cdot 3 + 15 \cdot y$$

$$15(3+y)$$

$$x \cdot y + x \cdot 5$$

$$x(y+5)$$

$$3x - 3 \cdot 2$$

$$3(x-2)$$

Makes multiplication
easier

$$12(103)$$

$$12(100+3)$$

$$12 \cdot 100 + 12 \cdot 3$$

$$1200 + 36$$

$$1236$$

$$23(99)$$

$$23(100-1)$$

$$23 \cdot 100 - 23 \cdot 1$$

$$2300 - 23$$

$$2277$$

$$8(1357)$$

$$8(1000 + 300 + 50 + 7)$$

$$8000 + 2400 + 400 + 56$$

$$10,856$$

Like terms

→ same variable

→ same exponent

$$2x^2 + 3x + 5x^3 + 2 + 7x^2 + 3$$

$$5x^3 + 9x^2 + 3x + 5$$

$$2x(x+3) + 5(x-10)$$

$$2x^2 + 6x + 5x - 50$$

$$2x^2 + 11x - 50$$

$$19 \cdot 6 + 19 \cdot 4$$

$$19(6+4)$$

$$19(10)$$

$$190$$