pp. 40-41   Multiplying Polynomials

Warm Up:
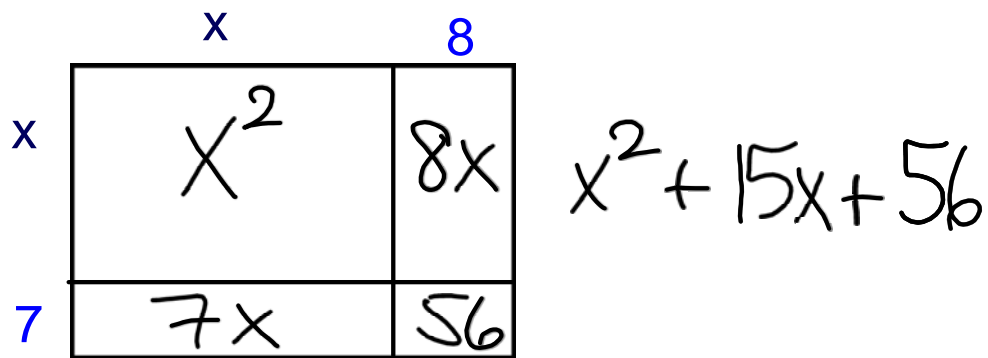
p. 40

1) Find the **total area** of the following rectangles:

	20	8
20	400	160
7	140	56

756

$27 \cdot 28 = 756$

p. 41
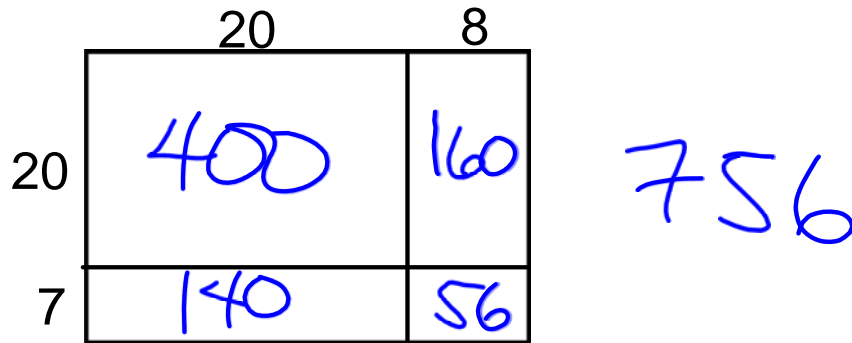
Find the total area of the following figure:

	X	8
X	x^2	8x
7	7x	56

$x^2 + 15x + 56$

How is the expression $(x + 8)(x + 7)$ is similar to the expression 28×27?

Explain how the result $x^2 + 15x + 56$ is related to 756 determined in the warm up?

Use the box method (area method to multiply the following binomials)

1) $(2x + 1)(5x + 6)$

$$5x \quad 6$$
$$2x \quad \boxed{10x^2 \quad 12x}$$
$$1 \quad \boxed{5x \quad 6}$$

$$10x^2 + 17x + 6$$

2) $(x + 6)(3x - 2)$

$$3x \quad -2$$
$$x \quad \boxed{3x^2 \quad -2x}$$
$$6 \quad \boxed{18x \quad -12}$$

$$3x^2 + 16x - 12$$

What other methods can you use to multiply polynomials?

Multiply the following and combine like terms.

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

$$2x^2 + 20x - 3x - 30$$

$$2x^2 + 17x - 30$$

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

$$3x^2 - 2x - 3x + 2$$

$$3x^2 - 5x + 2$$

What method would you use to multiply more complicated polynomials?

Multiply the following and combine like terms.

5) $(x^2 + 3x + 1)(x + 10)$

	x^2	$3x$	1
x	x^3	$3x^2$	$1x$
10	$10x^2$	$30x$	10

$$x^3 + 13x^2 + 31x + 10$$

Independent Practice

Worksheet - Odds

#23 bonus

Exit Ticket

Multiply $(x - 1)(4x^2 + 4x - 1)$ and combine like terms.