Algebra 1 8.3
Multiply binomials using EWE
Multiply polynomials using EWE

distributive property
EWE (~~FOIL = FAIL~~)
quadratic
standard form

Quiz 8.1-8.2

X-factor
triangle puzzle (if time)

**1B.** $(5y - 2)(y + 8)$

$$
\begin{array}{r}
5y - 2 \\
y + 8 \\
\hline
40y \quad -16 \\
5y^2 \quad -2y \\
\hline
5y^2 + 38y - 16
\end{array}
$$

Whiteboards

**Example 2 FAIL Method**

**Find each product.**

**a.** $(2y - 7)(3y + 5)$

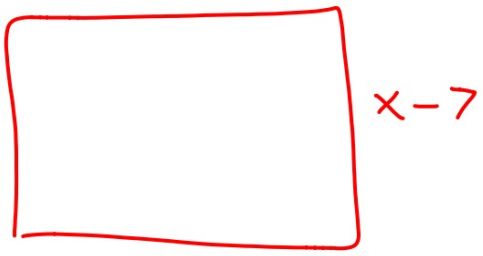
**b.** $(4a - 5)(2a - 9)$

## GuidedPractice

**2A.** $(x + 3)(x - 4)$


$8 \cdot 6 = 48$

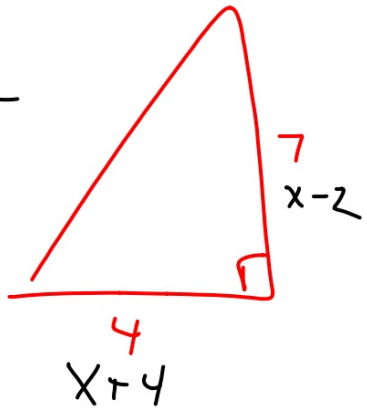
**2B.** $(4b - 5)(3b + 2)$




$A = (x+3) \cdot (x-7)$

**2C.** $(2y - 5)(y - 6)$

$\frac{b \cdot h}{2}$




$\frac{1}{2}x^2 + x - 4$

**2D.** $(5a + 2)(3a - 4)$

$A = \frac{1}{2}bh$

$\frac{1}{2} \cdot 4 \cdot 7$

14

$\frac{1}{2}(x+4)(x-2)$

$\frac{1}{2} \cdot (x^2 + 2x - 8)$

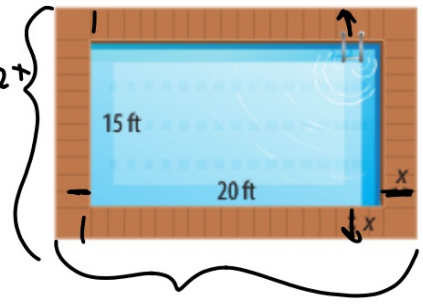
$\frac{1}{2}x^2 + \frac{1}{2} \cdot 2x + \frac{1}{2} \cdot -8$

$\frac{1}{2}x^2 + x - 4$

$x+4$
$x-2$
$x^2 - 2x - 8$
$+4x$
$x^2 + 2x - 8$

## Real-World Example 3 ~~FAIL~~ Method

**SWIMMING POOL** A contractor is building a deck around a rectangular swimming pool. The deck is $x$ feet from every side of the pool. Write an expression for the total area of the pool and deck.




**Understand** We need to find an expression for the total area of the pool and deck.

$A = (15+2x)\cdot(20+2x)$

$= 4x^2 + 70x + 300$

$15+2x$

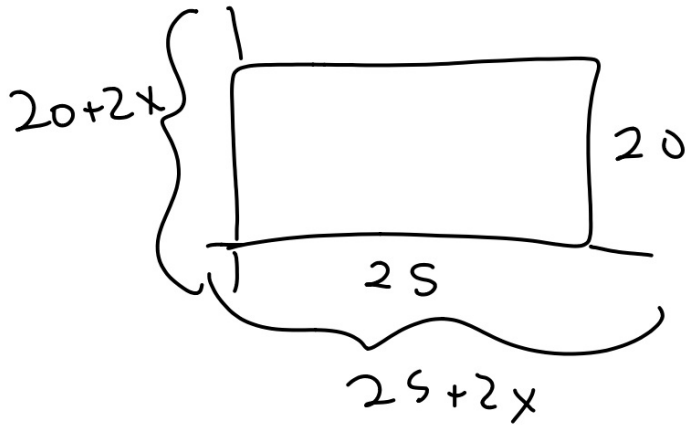
$20+2x$

$30x$ $4x^2$

$300$ $40x$

**GuidedPractice**

**3.** If the pool is 25 feet long and 20 feet wide, find the area of the pool and deck.



**Example 4** The Distributive Property

**Find each product.**

**a.** $(6x + 5)(2x^2 - 3x - 5)$

$2x^2 - 3x - 5$

$6x + 5$

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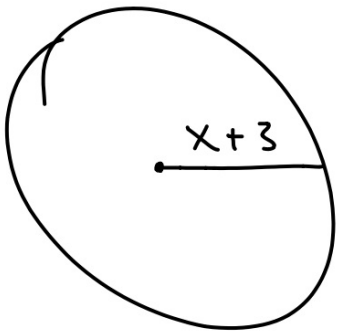
Matching'activity
Triangle puzzle

**b.** $(2y^2 + 3y - 1)(3y^2 - 5y + 2)$

## GuidedPractice

**4A.** $(3x - 5)(2x^2 + 7x - 8)$

**4B.** $(m^2 + 2m - 3)(4m^2 - 7m + 5)$




$A = \pi \cdot r^2$

$A = \pi (x+3)(x+3)$

$A = \pi (x^2 + 6x + 9)$

$= \pi x^2 + 6\pi x + 9\pi$

$\frac{1}{2} h (b_1 + b_2)$

$$\begin{array}{r} x+3 \\ \times\ x+3 \\ \hline 3x \quad 9 \\ x^2 \quad 3x \end{array}$$

WB odds
+22,24